



**CAUTION: Read the instructions before using this machine.**



## Air Machine Model AVVL Install & Owner's Guide

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[www.ivs-vacuum.com](http://www.ivs-vacuum.com)

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## **INDUSTRIAL VACUUM SYSTEMS**

**Congratulations on Your Purchase of an Industrial Vacuum Systems Air Machine**

As a business owner you want to ensure that all available profit centers on your property convey a clear concise message in regard to your product offerings. This all new air machine designed by Industrial Vacuum Systems is that product.

With a streamlined, sleek design, curb appeal, and the IVS name stamped on the front you know you have made the next profitable choice for your business or carwash site.



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## SAVE THESE INSTRUCTIONS

### IMPORTANT SAFETY INSTRUCTIONS

When using electrical machine, basic precautions should always be followed, including the following:

### READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE

This Machine is not intended for household use. It is intended for commercial use.

This machine is not intended for wet pick up use.

### WARNING – To reduce the risk of fire, electric shock, or injury:

This machine must be connected to a permanent electrical power supply in full compliance with all applicable codes and ordinances by qualified personnel only. Read grounding instructions.

1. Do not use on wet surfaces.
2. Do not allow to be used as a toy. Close attention is necessary when used by or near children.
3. Use only as described in this manual. Use only manufacturer's recommended attachments.
4. Do not operate or handle machine with wet hands.
5. Do not put any object into any openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
6. Keep hair, loose clothing, fingers, and all parts of the body away from openings and moving parts.

### GROUNDING INSTRUCTIONS

This machine must be connected to a grounded metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the machine.

### GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

To provide additional protection from the risk of electric shock, this product shall only be connected to a circuit that is protected by a ground fault circuit interrupter (GFCI).

### DANGER

Installation of this machine must incorporate and provide full disconnection of all poles in the event an overvoltage category III condition. Such incorporation to the fixed wiring must be in accordance with the wiring rules.



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Industrial Vacuum Systems (Company) provides a limited one year warranty on components and piece of equipment produced by the Company to be free from defects in material and workmanship. Electrical assemblies see Appendix A, have a limited two year warranty on the controller to be free from defects in material and workmanship. This limited warranty does not cover equipment that has been damaged due to misuse, misapplication, modification, altered, neglected, attempted theft, vandalism, connection to improper voltage supply, modification, or such parts that are commonly recognized to be subject to wear in normal usage. Normal use products are, but not limited to, those listed on Appendix B; which are warranted for 90 days. Every component and piece of equipment is packaged to assist in safe handling of the product.

Claims must be submitted in writing within the appropriate coverage period as covered by this warranty, from date of shipment, to the Company's warranty/ repair department. If the return is approved an RMA and labeling instructions will be issued and the product can be returned. Returned product without the appropriate RMA and label will be issued to scrap and all warranties/ replacements will be considered null and void. If the product receiving the RMA is not returned within 20 days from date of issuing the RMA then any credit toward the product will be reduced by 25%. If the product is not returned within 30 days of issuing the RMA then any credit will be reduced by 50%. A testing fee of \$20.00 will be applied, if the product passes all tests related to the written claim, then the fee will be applied and paid prior to return of the product. If the product fails the test then the fee will not be applied. The Company may charge a 20% restocking fee for returned product and/or an order, which is canceled and/or material has already been ordered and/or received to fill such order.

The Company's warranty/repair department will inspect all components, submitted under warranty. Warranty replacement will be based solely on the analysis and confirmation that the product defect was caused by material and/ or workmanship. The company reserves the right to change the design of the product without assuming any obligation to modify any product previously manufactured or to replace warranted product other than with redesigned product. In some cases it is easier for the customer to send a Company purchased product direct to the manufacturer for replacement. In those cases the customer will be notified that their product falls under that process and should work with that manufacturer directly. Appendix C shows the purchased parts that falls under this case.

This warranty covers the product replacement only; charges for damages, freight and/or labor will not be accepted. There are no warranties expressed or implied which extend beyond this Limited Warranty. The loss of use of the product, loss of time, inconvenience, commercial loss, incidental or consequential damages is not covered. The Company shall not be liable for incidental, special, or consequential damages including without limitation damages resulting from personal, bodily injury or death or damages to or loss of use of property.

**APPENDIX A 2-Year Warranty** Controllers Sensortron, Multitron, Touchtron, 24 VAC Timer, Liberator, AVVL Compressor

**APPENDIX B 90-Day Warranty** Components Pressure Hoses, Swivels, Nozzles, Safety Shut-off Guns, Seals, O-Rings, Shop Vac, Electromechanical Devices, Vacuum Motor Brushes, Valves and Regulators

**APPENDIX C Purchased Products** that are Handled Direct with the Manufacturer Shop Vac, IDX Products, Bill Acceptors, Pump Motors, Dixmor Timers, CAT Pumps, Flojet Pumps





## System Configurations\*

- Industrial Vacuum Systems proprietary air compressor
- 1-85psi tire inflation
- 1/4" steel braided rubber 25' air hose assembly
- 14 gauge stainless steel construction
- Air inflation gauge
- Concealed pin lock locking mechanism
- Optional hose hanger mounting
- Internal coin drawer with lock mounting
- 110vac accumulating timer assembly

## Product Options

- Imonex mechanical coin acceptor(standard)
- Sensortron single coin electronic coin acceptor
- Magikist CP-900R
- Loonie mechanical coin mechanism
- Mars MEI \$1 & \$5 bill acceptor
- Push button with non-accumulating timer(free air option)
- \*Production specifications subject to change without notice

## Power Requirements

- 120VAC single phase 15amp dedicated power feed circuit

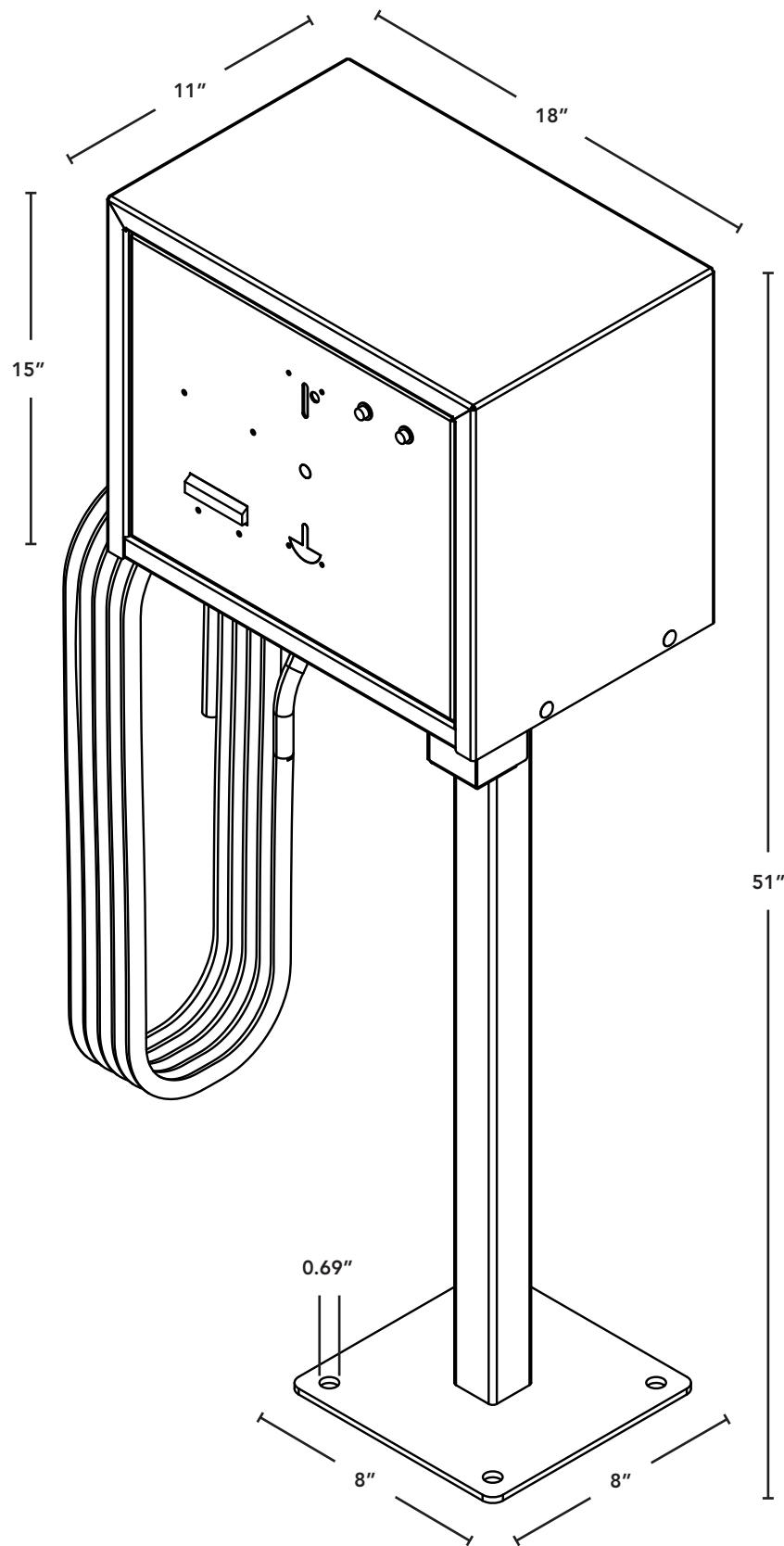


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## Installation Options

The IVS air machine can be mounted on an optional pedestal PN: AVVLP or attached to a wall. The unit features several knockouts for different options, the air hose and hanger can be mounted on the right or left side. There are options for power feed through the back, bottom, or via the pedestal mount.



# Bleeder Valve Adjustment

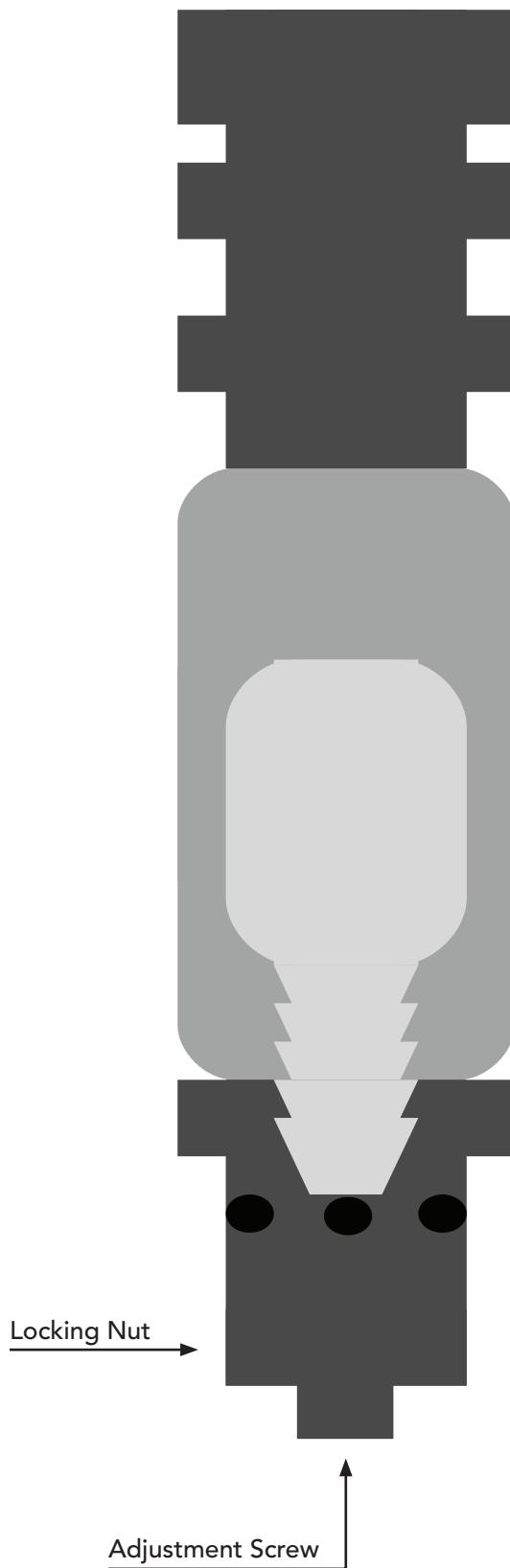


## Adjusting the Bleed Valve for Optimum Performance

If you notice that the unit fails to start quickly enough after additional coins are deposited, you will need to adjust the bleed valve.

Set the pressure relief valve for approximately 10 PSI above the desired pressure limit.

Adjust the bleeder valve by loosening the locking nut and backing the adjustment screw out, to bleed the air pressure faster. Be careful as this also decreases the maximum pressure output.

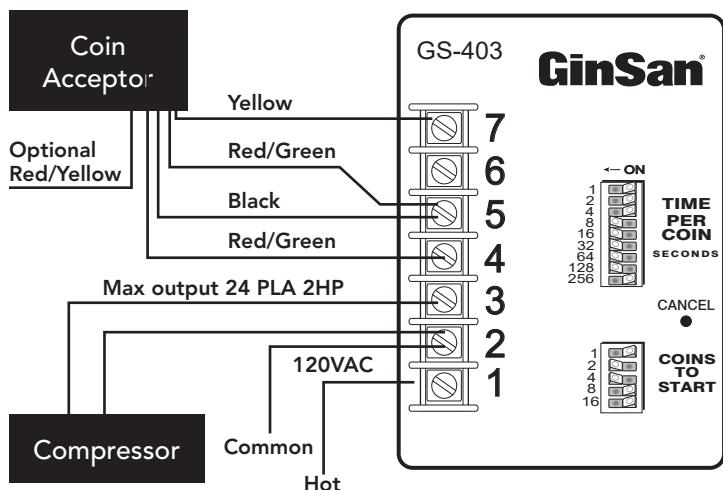


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# GS-403 Wiring Instructions



\*Terminal Screw Torque 10 in./lbs

- #7 - 24vac high
- #6 - remote reset (#5 & #6)
- #5 - 24vac low
- #4 - coin switch
- #3 - 115vac load 24FLA 2HP
- #2 - 115vac common
- #1 - 115vac line hot

## Setting the COIN to START Switch

The Coins to Start is determined by adding the total number of switches in the "On" position.

Example: 1 + 2 = 3 coins to start



## Starting the Timer

Jump a wire between terminals #4 and #5. A count will register in the timer for every jump, which is the same as putting coins in the coin acceptor

## If Timer Fails to Start

Disconnect the coin switch wire on terminal #5 and repeat starting procedure.

## If timer starts at this point, the trouble may be...

1. A bad coin switch or acceptor.
2. Broken wire or bad connection.
3. Wires shorted between terminals #4 and #5 or shorted between #5 and #6.

## Timer Starts on One Less Coin than Setting

Coin switch wired wrong (should be wired to normally open terminal & common terminal).

## Setting the TIME PER COIN Switch

Determine amount of coins to start the timer.

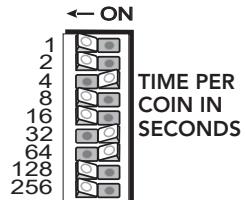
Example: 3 coins to start

Convert time desired to seconds.

Example: 5min. = 300 seconds

Divide the total time (seconds) by the coins to start the timer.

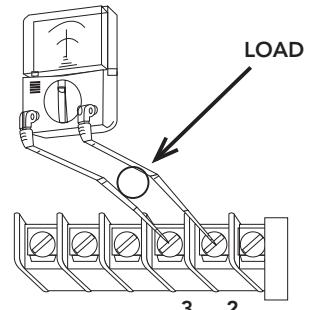
Example: 300 sec. /3 = 100 seconds per coin



The Time per Coin is determined by adding the total seconds of the switches in the "On" position. If for instance, the desired time is 100 seconds, switch on the number of switches needed to add up to 100 seconds. Example: 100 sec.=64+32+4

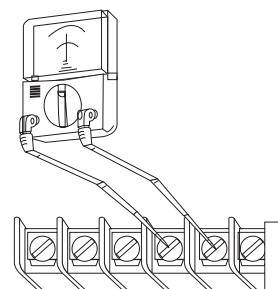
## Checking Power Out to Compressor

A load of no less than .5 amps has to be hooked across terminals #2 and #3, to indicate time turning on. Without a load on the timer, it may not turn on or shut off. A volt meter across terminals #2 and #3 will indicate timer turning on and read output voltage. Check amp draw of motors using a clamp-on type amp meter.



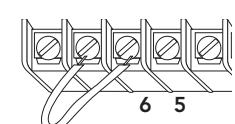
## Checking Power to Timer

Using a volt meter across terminals 1 and 2 will indicate incoming voltage.



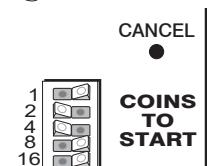
## Stopping the Timer

Use a jumper wire and touch across terminals #5 and #6. Or Press the Cancel button.



## If Timer Will Not Stop

All time switches are in the off position.

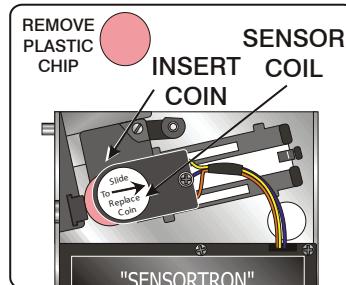


# Sensortron Coin Acceptor



## To Install Sample Coin Or Token

1. Slide sensor coil to the right and replace plastic chip with coin or token
2. Release sensor coil, making sure sample coin or token is held firmly in place
3. Do not use a 1965 or 1974 quarter as a sample



## Selectivity Adjustments

Sensortrons are Preset for Use With U.S. Quarters



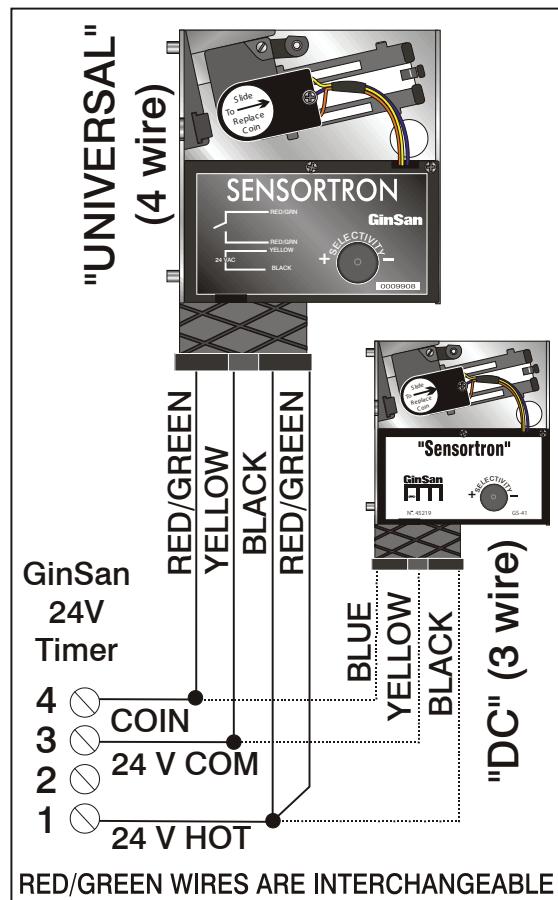
The selectivity control is designed to enable field adjustments for closer coin scrutiny, thereby providing a greater rejection of slugs.



1. Remove black rubber plug
2. Using small screwdriver, locate adjusting slot on potentiometer (pot.).  
(Slot is difficult to see in the jelly-like substance.)
3. Turn pot. clockwise as far as it will go
4. Turn pot. counterclockwise (a little at a time until it rejects all unwanted coins)
5. Replace rubber plug



## Wiring



NOTE: YOU MUST HAVE AT LEAST 24 VOLTS AC ACROSS BLACK AND YELLOW WIRES.



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## Special Instructions:

- Do Not allow a coin box heater to come in contact with the Sensortron
- To interface a 24 volt mechanical coin counter with a Sensortron, order a GS-17 interface, Part Number 77060

## Universal Sensortron Wiring Instructions For Various Timers

Note: Red/Green wires are interchangeable.

### GinSan Timer (GS-9 110 Volt)

#### to Universal GS-41

Black wire to Terminal #5

Yellow wire to Terminal #7

Red/Green wires to Terminal #4 & #5

### GinSan Timer (GS-11 110 Volt)

#### to Universal GS-41

Black wire to Terminal #4

Yellow wire to Terminal #1

Red/Green wires to Terminal #3 & #4

### D & S Timer to Universal GS-41

Black wire to 24 Hot(L1)

Yellow wire to 24 Common(L2)

Red/Green wires to 24 Common(L2) & Coin Terminal

### Paraplate Timer to Universal GS-41

Black wire to -Coin Switch

Yellow wire to Jumper for 24 V AC

Red/Green wires to +Coin Switch & -Coin Switch

### Keltner Timer 24 Volt to Universal GS-41

Black wire to Terminal #2

Yellow wire to Terminal #1

Red/Green wires to Terminals to #2 & #4

### Parker Timer to Universal GS-41

Black wire to Terminal #1

Yellow wire to Terminal #3

Red/Green wires to Terminals #1 & #4

### Dixmor Digital Timer to Universal GS-41

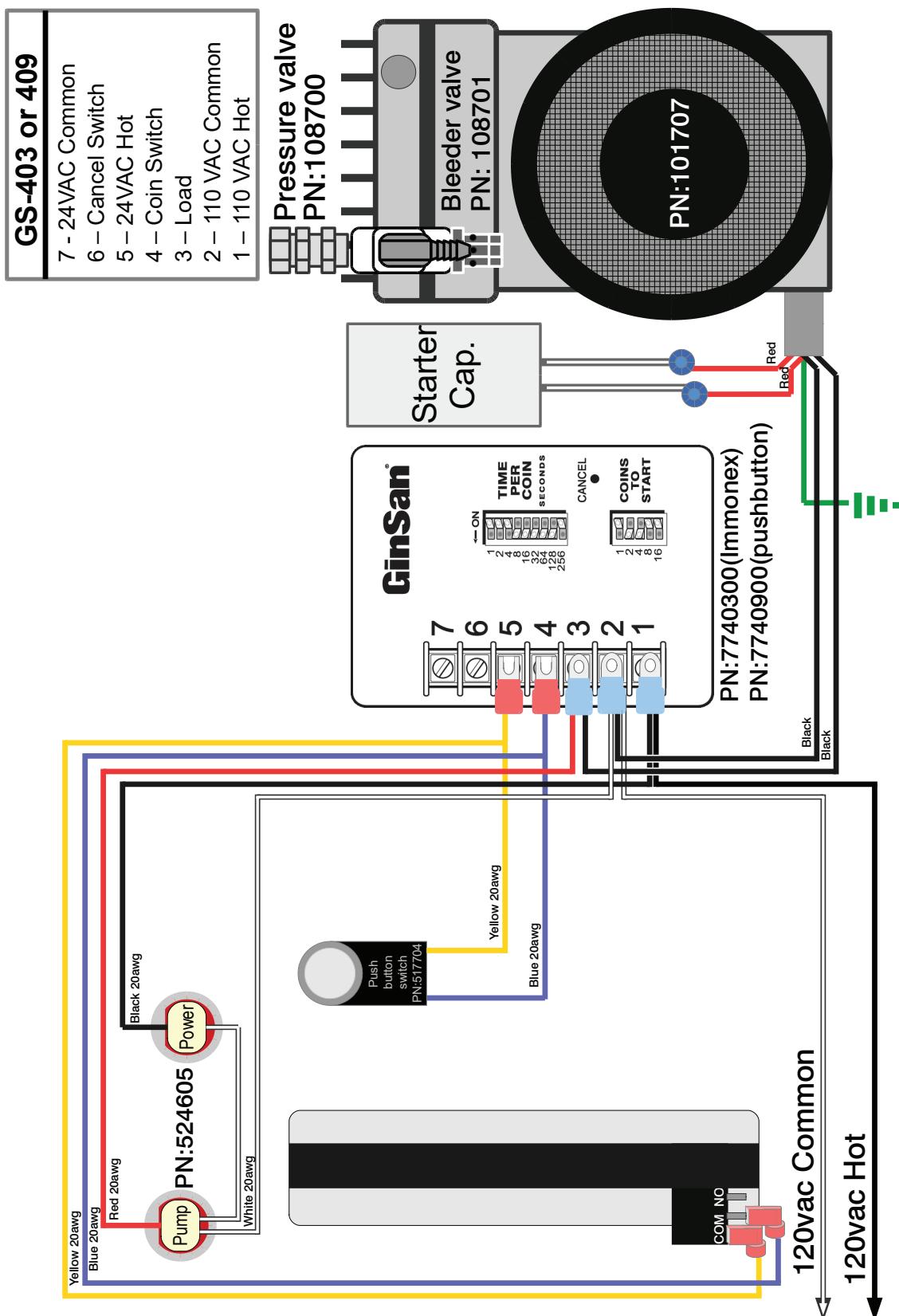
Black wire to 24 V AC Hot (IN)

Yellow wire to 24 V AC Common (IN)

Red/Green wires to Coin Common & Coin Signa



# Mechanical Coin Mechanism or Push Button



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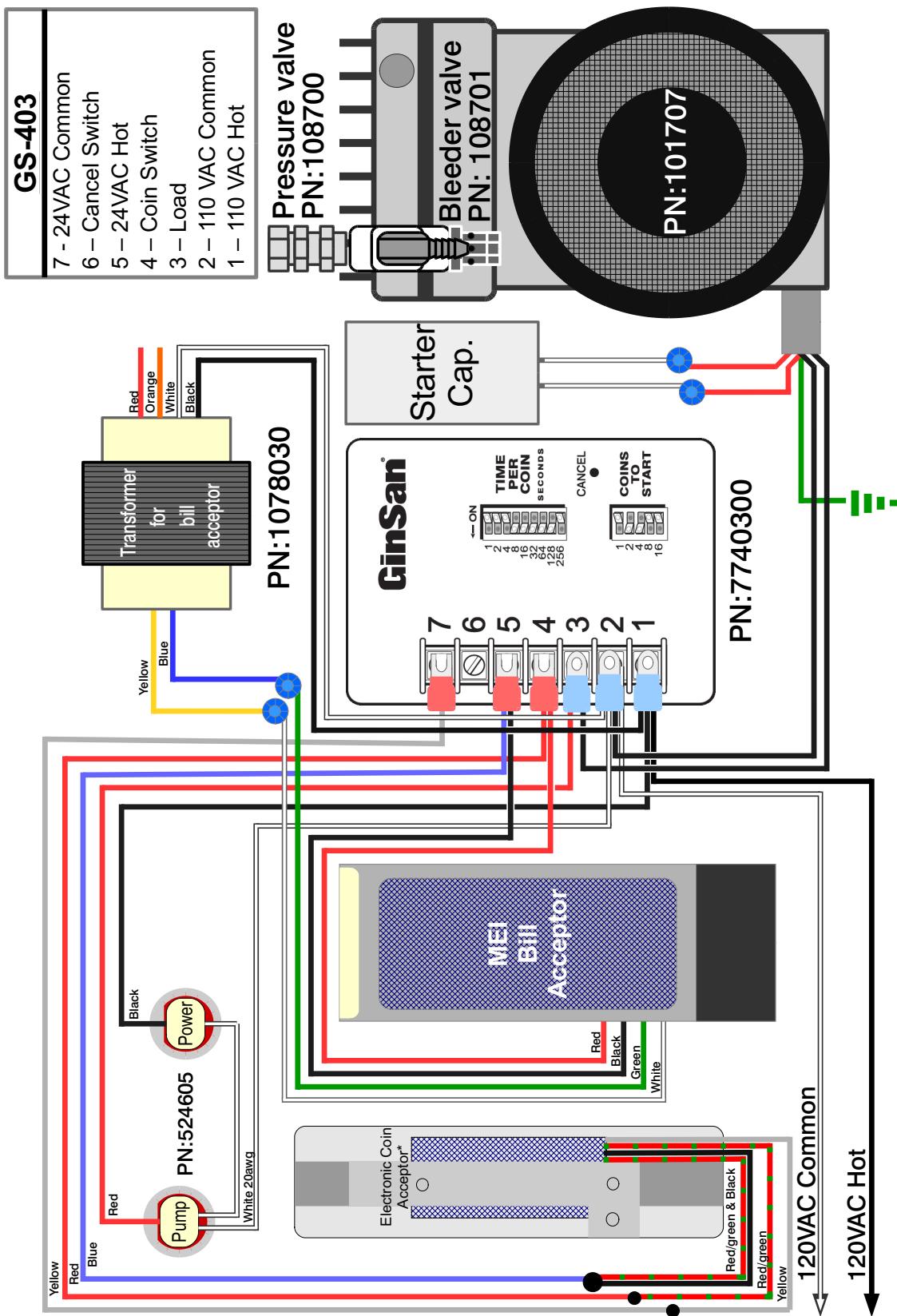
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# Electronic Coin Mechanism and Bill Acceptor



## Related Parts and Products



Imonex Coin Acceptor  
US Quarters  
Part Number: 1002300



Magikist 900R  
Canadian Coin Acceptor  
Part Number: 1002020



Sensortron Coin Acceptor  
Part Number: 7704200



2" Coin Acceptor  
Loonie Mechanical  
Part Number: 1002240



CPI Bill Acceptor  
US \$1 & \$5  
Part Number: 100596-00



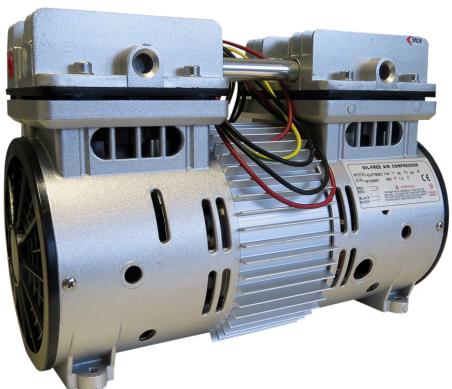
Air Hose  
Cut Resistant 25'  
Part Number: 1040020



Inflator with Whip  
and Gauge  
Part Number: 1034020



Lock with two keys  
Part Number: 1048010



Compressor 110V  
(Ginsan)  
Part Number: 1017070



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## NOTES

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## NOTES



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