

Master Control Panel



Installation Manual

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Main Control Box

— NOTICE —

All wiring between the main control box and equipment should be **Class B, low-voltage**. *In most cases, a conduit is **not** required when using this type of wiring.*

— WARNING —

Before proceeding with any electrical installation, comply with and maintain all applicable local electrical code(s) and regulations.

1. Position the main control mounting box, so that the master control panel switches can be eye level, in a convenient location (near the office's entrance/exit).
2. Once the main control mounting box is in position, secure it using the brackets provided.

IMPORTANT NOTE: *To ensure proper installation of the finished master control panel, the mud flange must be recessed by dry wall thickness.*

3. Install the main control box wires as follows:
 - a. Using a hammer and pliers, remove the appropriate knock-out from the main control mounting box.
 - b. Fit a nylon grommet in the knock-out. *(This protects the wires from chaffing and shorting out.)*
 - c. Run the appropriate wires to their respective equipment location. Then connect the wires according to the instructions on the following pages.
4. After all wiring connections are completed correctly, position the master control panel over the main control box and secure using the screws provided.

WIRING CHART

Model No.	No. of Wires	Wire Under 150 ft.	Wire Over 150 ft.
CV-101	3	18 AWG	16 AWG
CV-102	3	18 AWG	16 AWG
DV-301	3	18 AWG	16 AWG
DV-302	3	18 AWG	16 AWG
MC-201	6	18 AWG	16 AWG
MC-202	6	18 AWG	16 AWG
Air Compressor	3	18 AWG	16 AWG
MWCV Solenoid Valve	2	18 AWG	16 AWG
MWCV Transformer	2	18 AWG	16 AWG

Single/Dual Vacuum Pump Relay Box Connection

(All Panels, Except Turbine)

— CAUTION —

Before making any wiring connections to the main control box, the vacuum unit should be completely installed.

— WARNING —

Before proceeding with the single/dual vacuum pump relay box connection, make sure the electrical power supply to the vacuum pump is turned **OFF**.

— NOTICE —

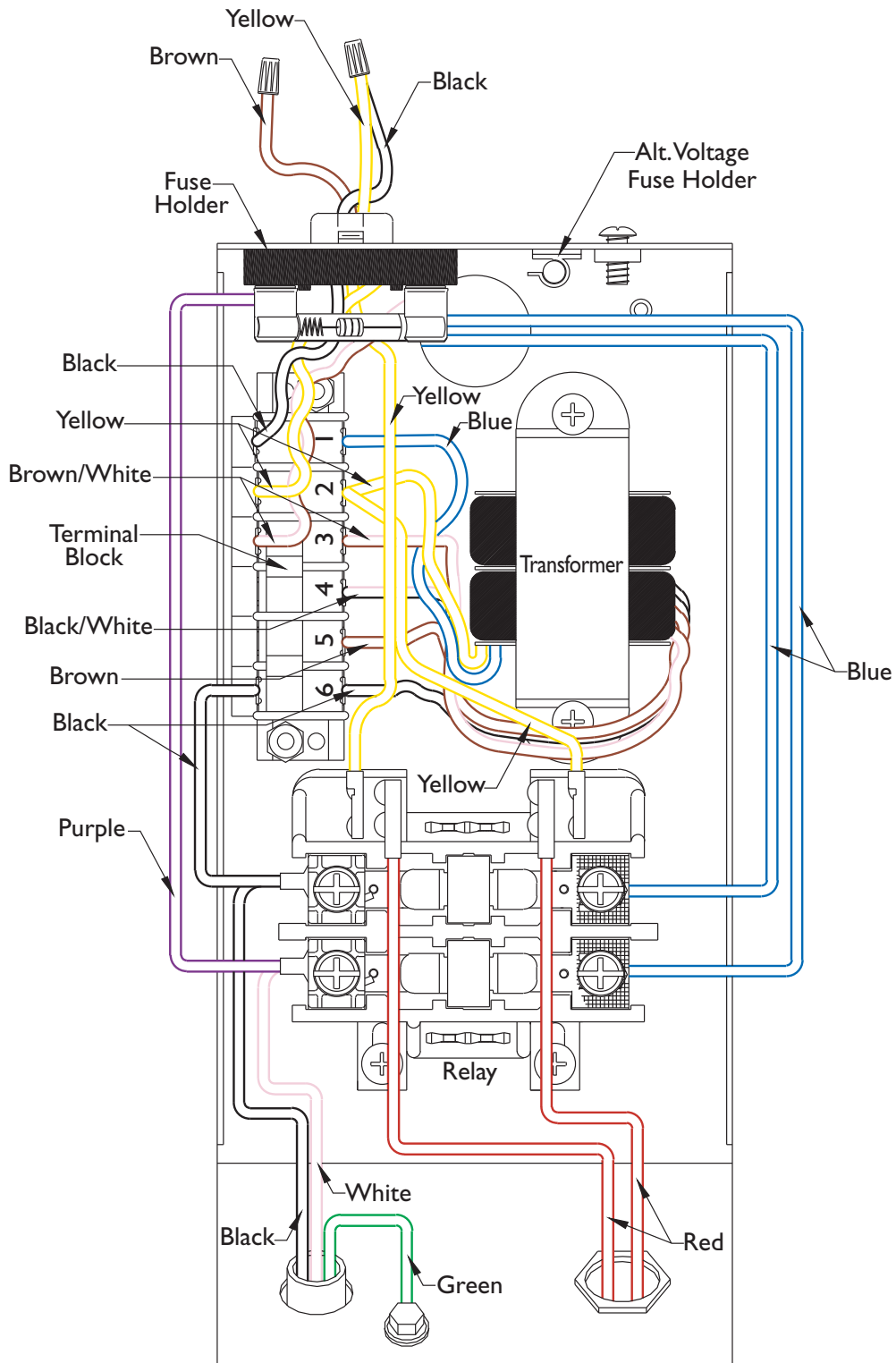
All pumps (single or dual) must have three, low-voltage wires installed from the top of each relay box going to the main control box in order to operate the master control panel lighted **ON/OFF** switches.

IMPORTANT NOTE: For dual vacuum pump relay box connection to the main control box, Steps 1 through 8 listed below must be performed for each vacuum pump. Refer to the vacuum pump relay box wiring diagram on the next page.

NOTE: For vacuum pump relay boxes with factory-installed yellow, black and brown wires, it is not necessary to perform Steps 1 through 8.

1. Loosen the top and bottom retainer screws from the vacuum pump relay box and remove the cover.
2. Remove the black strain relief grommet from the top of the vacuum pump relay box.
3. Place the tap connector slot over the yellow transformer wire, and insert the brown wire into the end of the tap connector.
4. Squeeze the metal connector tight, and snap the attached cover in place.
5. Route the brown wire out through the strain relief grommet hole along with the yellow and black wires.
6. Reinstall the strain relief grommet around the yellow, black and brown wires.
7. Reinstall the relay box cover and tighten the top and bottom retainer screws.
8. Run and connect the low-voltage wires to the main control panel mounting box according to the applicable wiring diagram in Section II Schematics. (Refer to the index on Page 8 for the location of the appropriate diagram.)

Vacuum Pump Relay Box Wiring Diagram



Master Water Control Valve Connection

(With 24-Volt Lighted Control Switch)

— NOTICE —

When using low voltage to operate the master water control valve (MWCV), a 115-volt electrical receptacle for the MWCV “plug-in” transformer must be supplied.

1. Remove the MWCV from the shipping container or locate a previously installed MWCV in the office.

— WARNING —

Before proceeding to Step 2, make sure all power is properly disconnected.

2. Dismantle the coil assembly.
3. Replace the 115-volt coil with the 24-volt coil included in the kit.
4. Provide power to the coil assembly using the “Plug-In” 115V/24V transformer supplied with the kit.
5. Connect the two low-voltage wires from the transformer according to the applicable master control panel wiring diagram in Section II.

— WARNING —

Do not plug in the transformer until all electrical connections are complete.

6. Test the MWCV and transformer as follows:
 - a. Turn the light switch to the **OFF** position. (The light should be off.)
 - b. Turn the light switch to the **ON** position. (The light should be on.)
 - c. When the switch is activated, the MWCV should make a clicking sound, which indicates the valve is working properly.
 - d. If the light fails to come on, or if the MWCV fails to function, check all connections referring to the applicable master control panel wiring diagram in Section II.

NOTE: *If a light stays **ON** while the switch is in the **Off** position, simply reverse the wires numbered **2** and **3** on the switch. The light should then operate correctly.*

Air Compressor Remote Connection

1. Turn **OFF** all power to the air compressor at the source.
2. Mount the compressor relay box near the junction box on the air compressor.
3. Connect the power source supply lines to L1 and L2 on the compressor relay box for new installation.

NOTE: *For existing installation, first remove the power source supply lines from the junction box.*

4. Connect conduit from the compressor relay box to the junction box.
5. Connect the two lines from T1 and T2 to the two compressor power lines in the junction box.
6. Run and connect low-voltage wires to the main control box according to the applicable master control panel wiring diagram in Section II.

RAMVAC Rocker Switch Installation

When connecting a RAMVAC pump, replace the VAC switch in the Master Control Panel with the loose switch supplied.

Please use this schematic for RAMVAC rocker switch installation in the following panels:

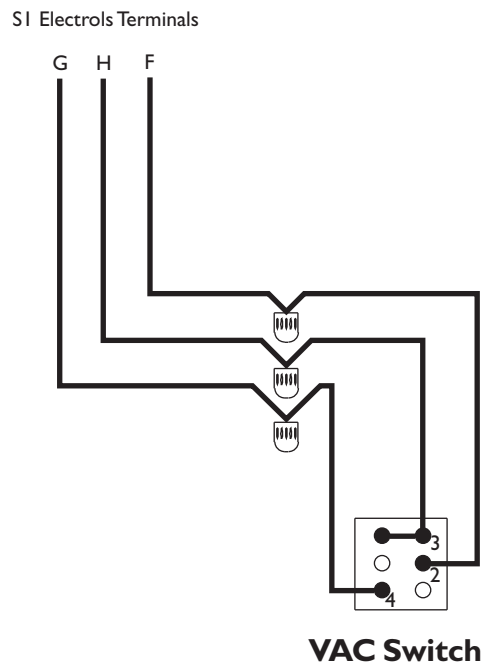
<u>PANEL</u>	<u>PART #</u>
MP300	64652017
MP1000	64568077
MP2000	64568110
MP1000A	64568171
MP2000A	64568174

Connect to an S1 Electrols as follows:

Terminal #4 - connect to S1 terminal "G"

Terminal #3 - connect to S1 terminal "H"

Terminal #2 - connect to S1 terminal "F"



Master Control Panel Wiring Diagrams Index

MP - 100 / 300 9

MP - 400 10

MP - 700 11

MP - 900 12

MP - 1000 13

MP - 1100 14

MP - 1200 / 1300 15

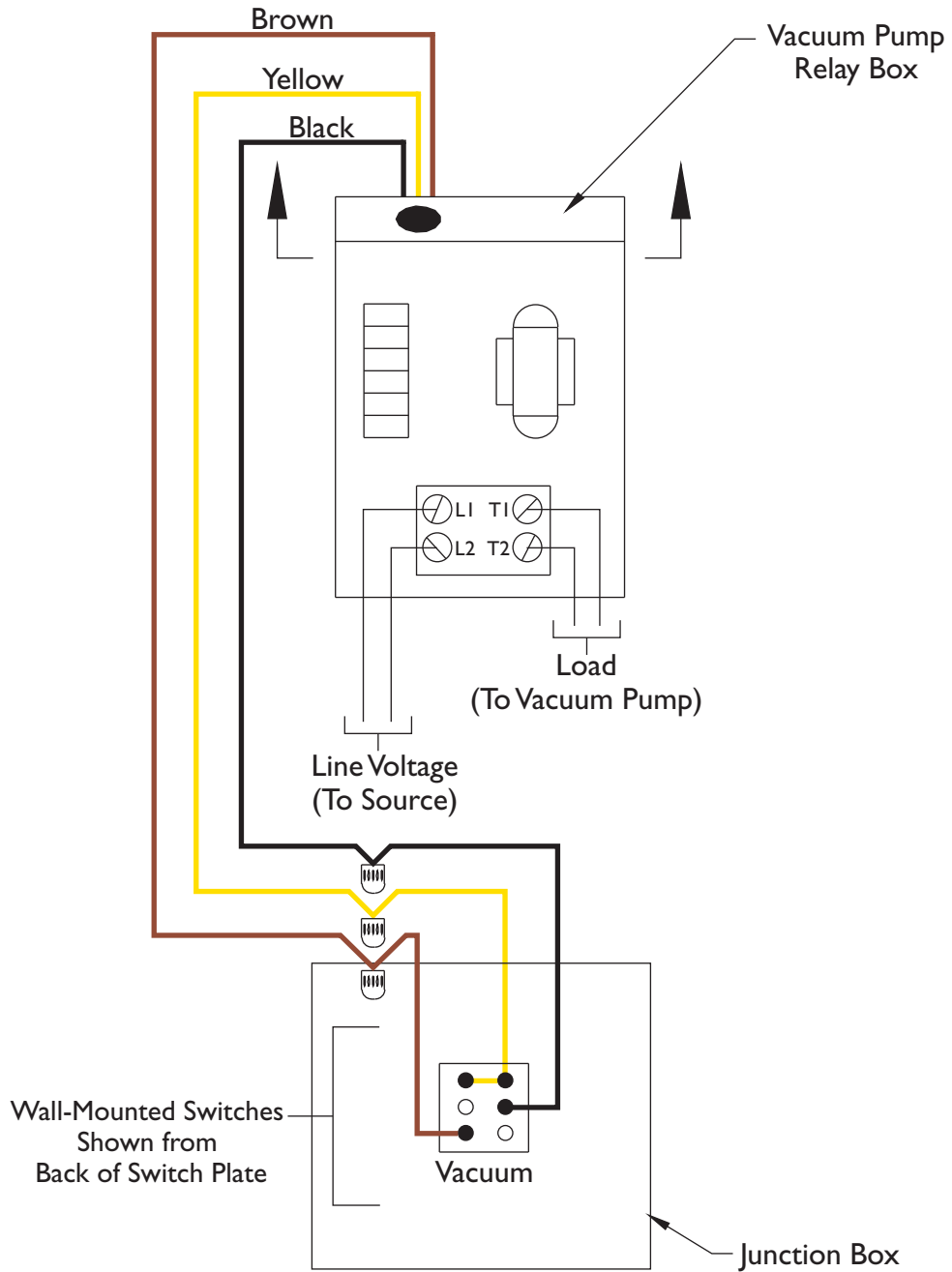
MP - 1800 16

MP - 2000 17

MP - 2200 18

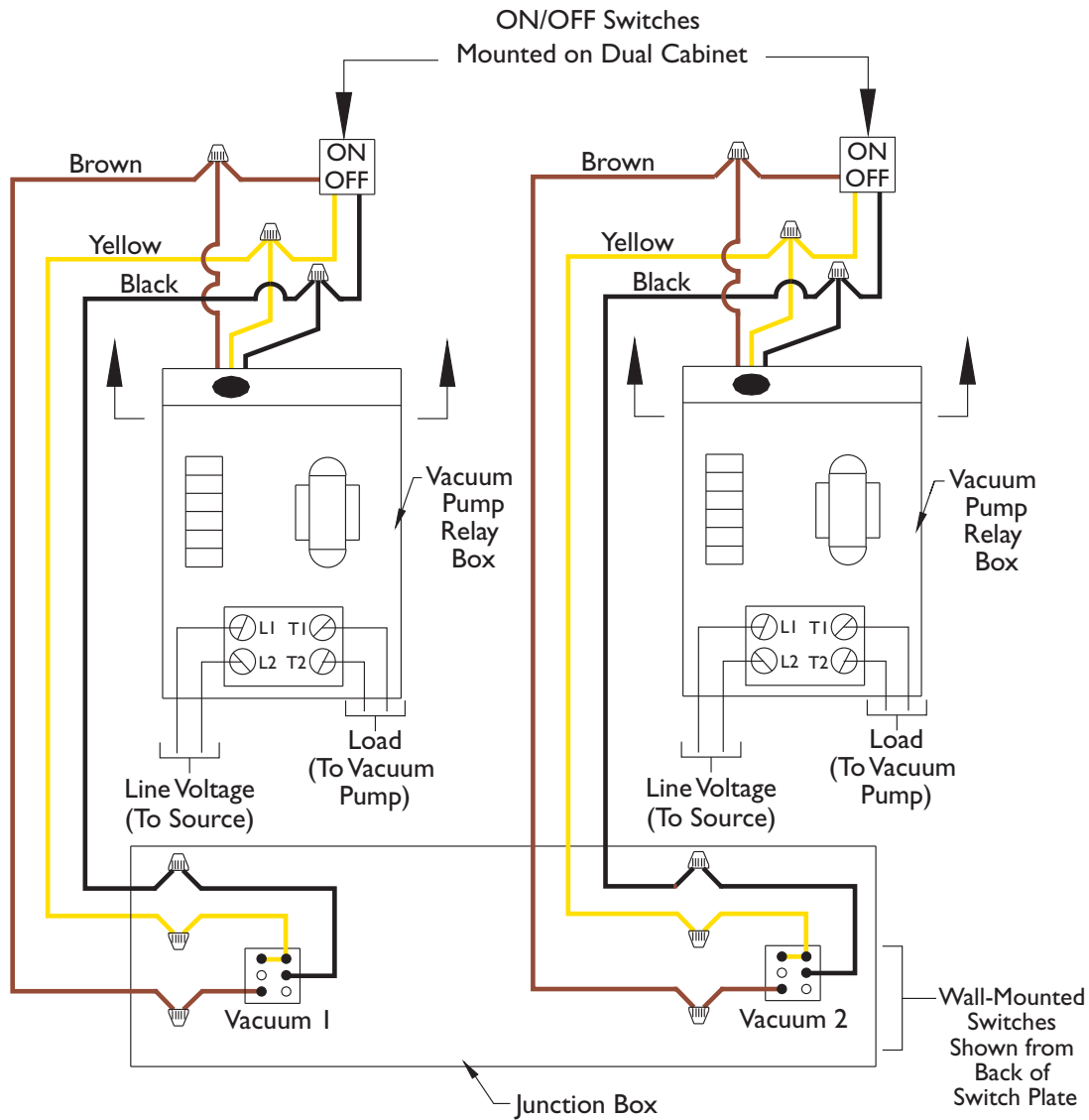
MP - 100 / 300

One Switch, Single Vacuum

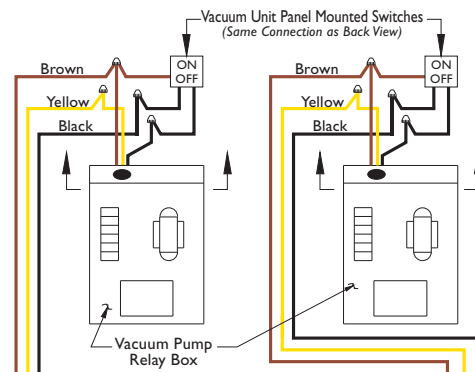


MP - 400

Two Switch, Dual Vacuum

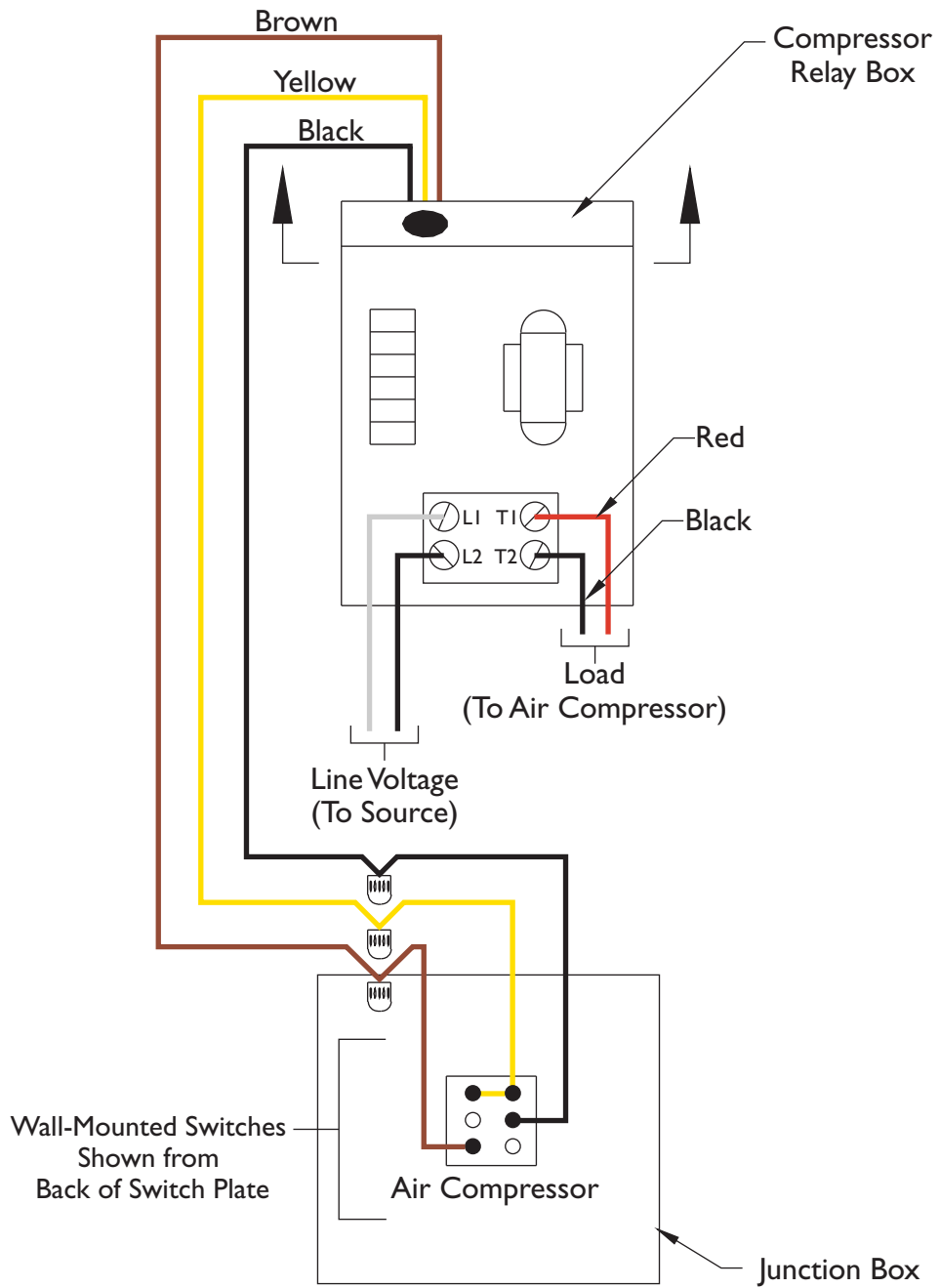


NOTE: Using the circuit depicted in the diagram above, either switch will turn the vacuum pumps on. To wire pumps so that either switch will turn the vacuum pumps off, use the circuit shown in the diagram to the right.



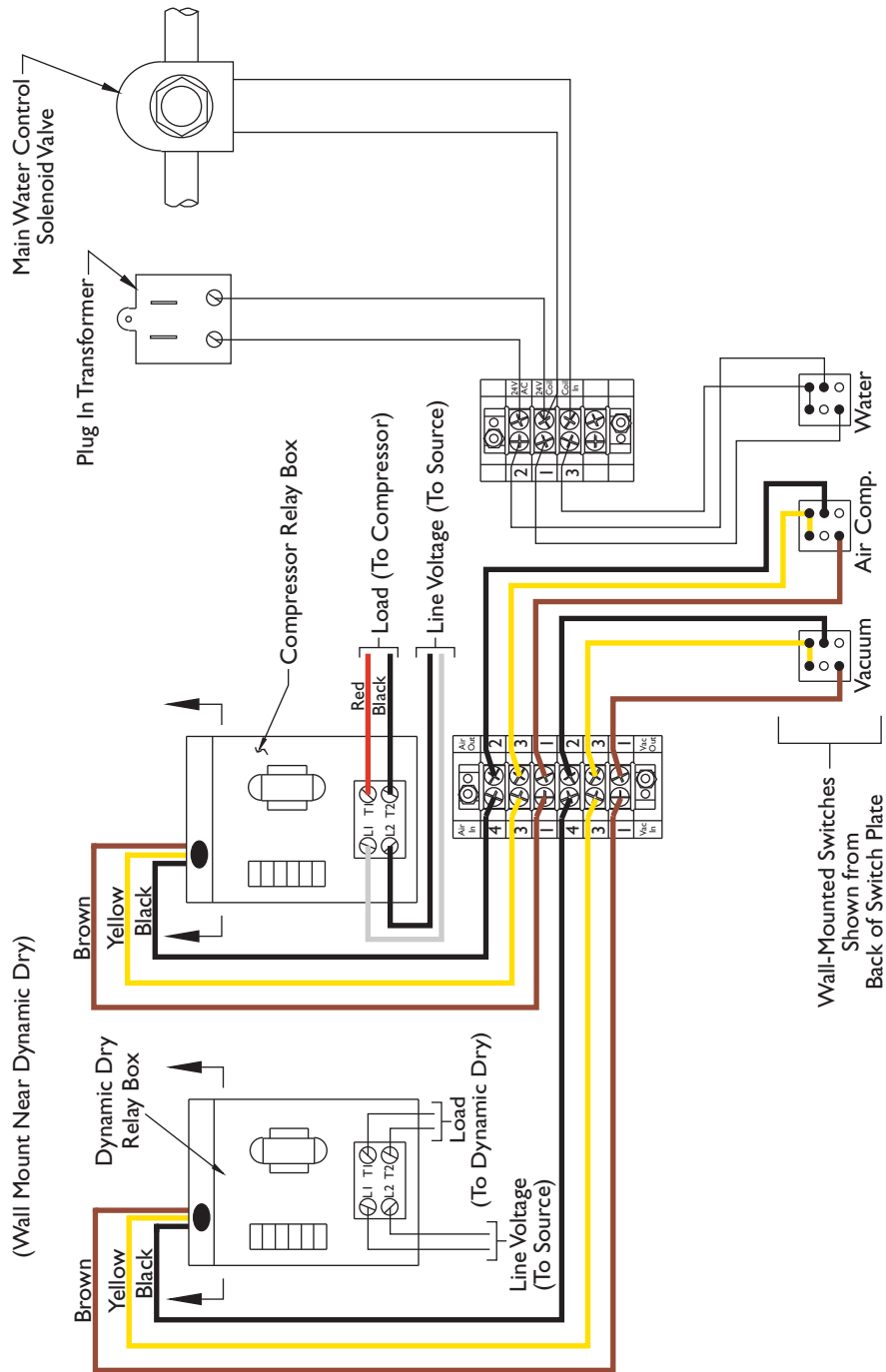
MP - 700

One Switch, Air Compressor



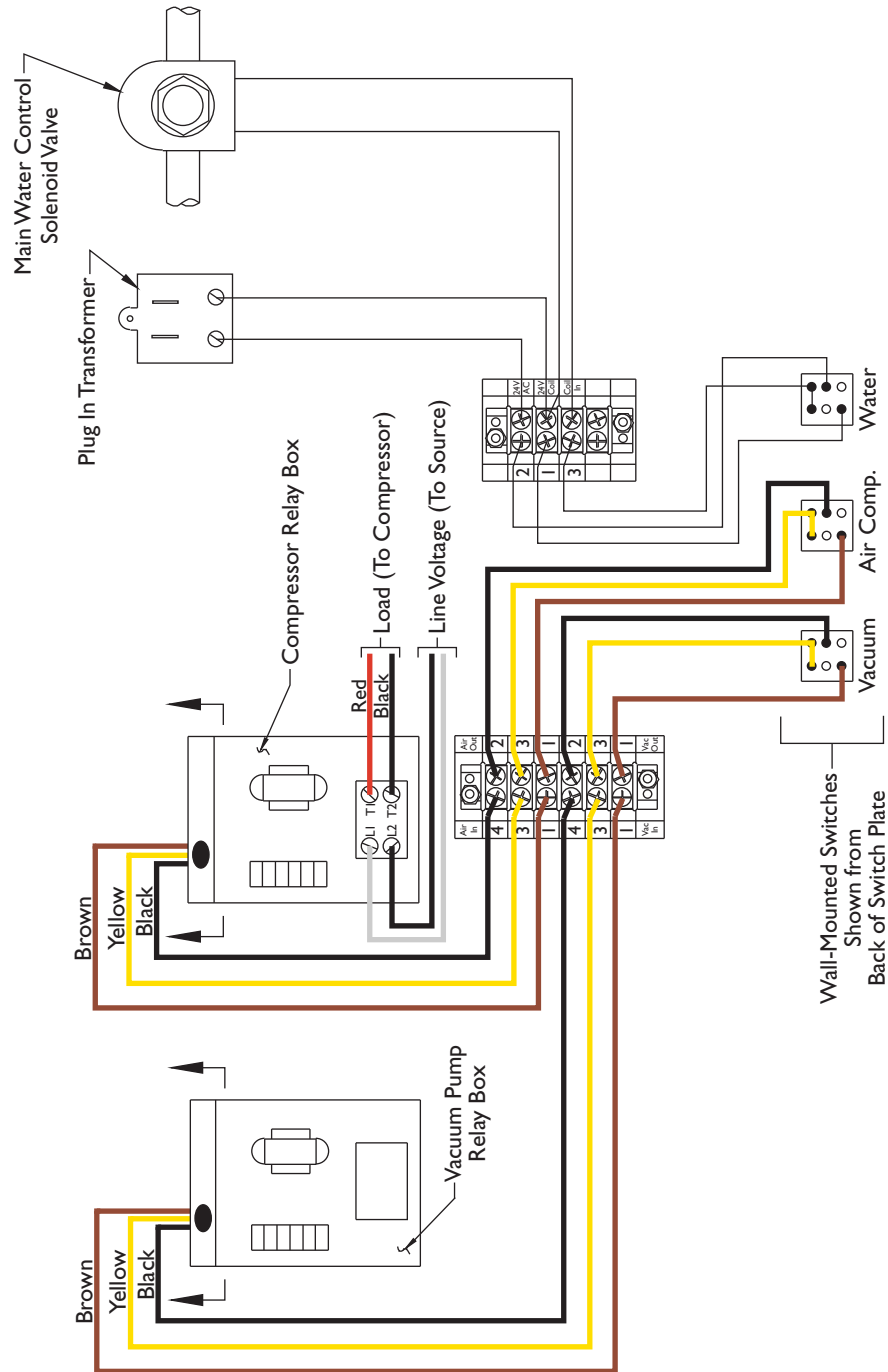
MP - 900

Three Switch, (Dynamic Dry) Single Vacuum, Air Compressor, Water



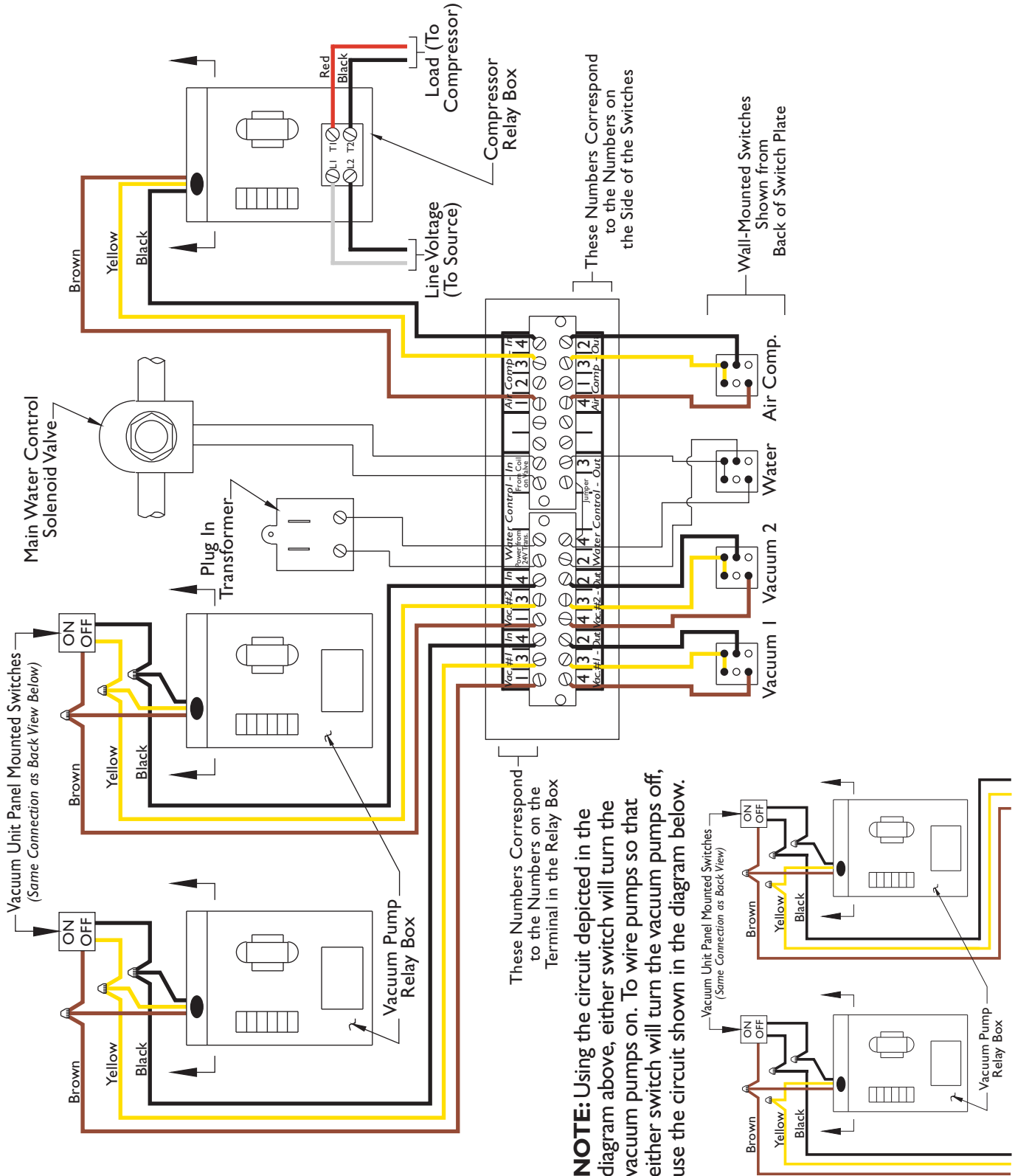
MP - 1000

Three Switch, Single Vacuum, Air Compressor, Water



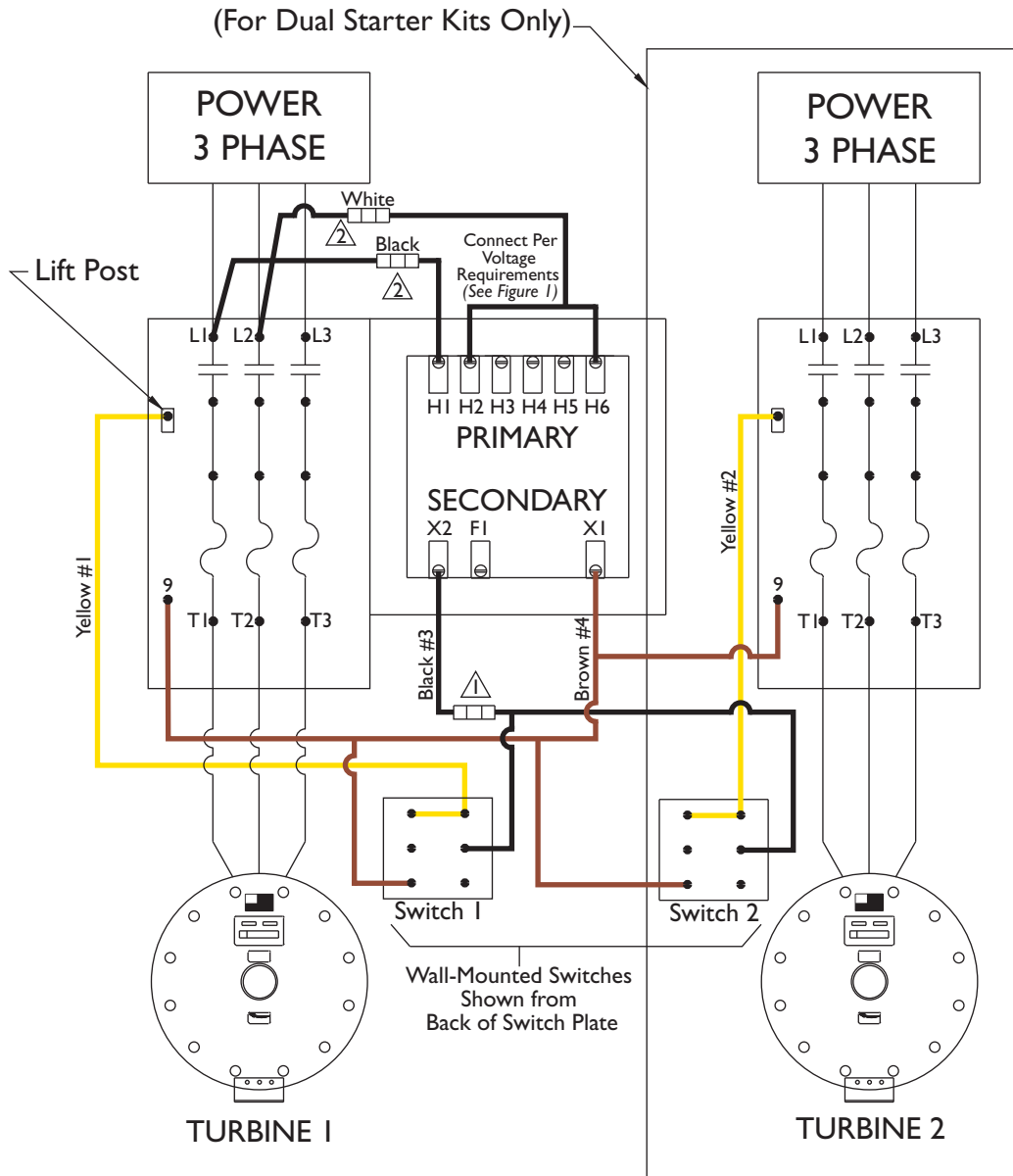
MP - 1100

Four Switch, Dual Vacuum, Water, Air Compressor



MP - I200 / I300

One Switch



- Fuse Type FNM - 6 1/4 AMP
- Fuse Type KLK - 12-2 AMP

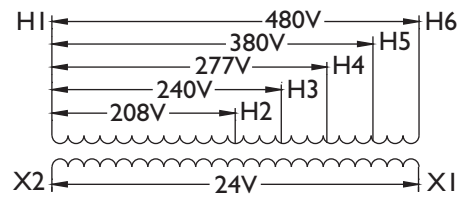
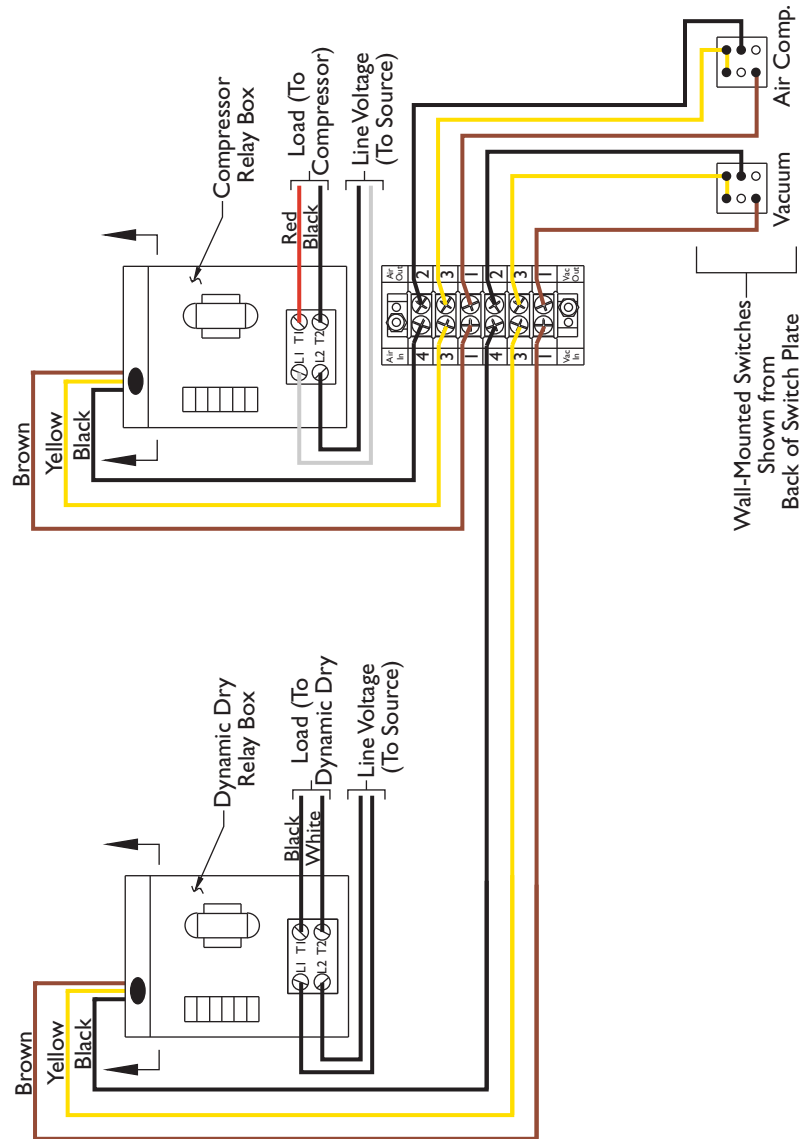


Figure 1

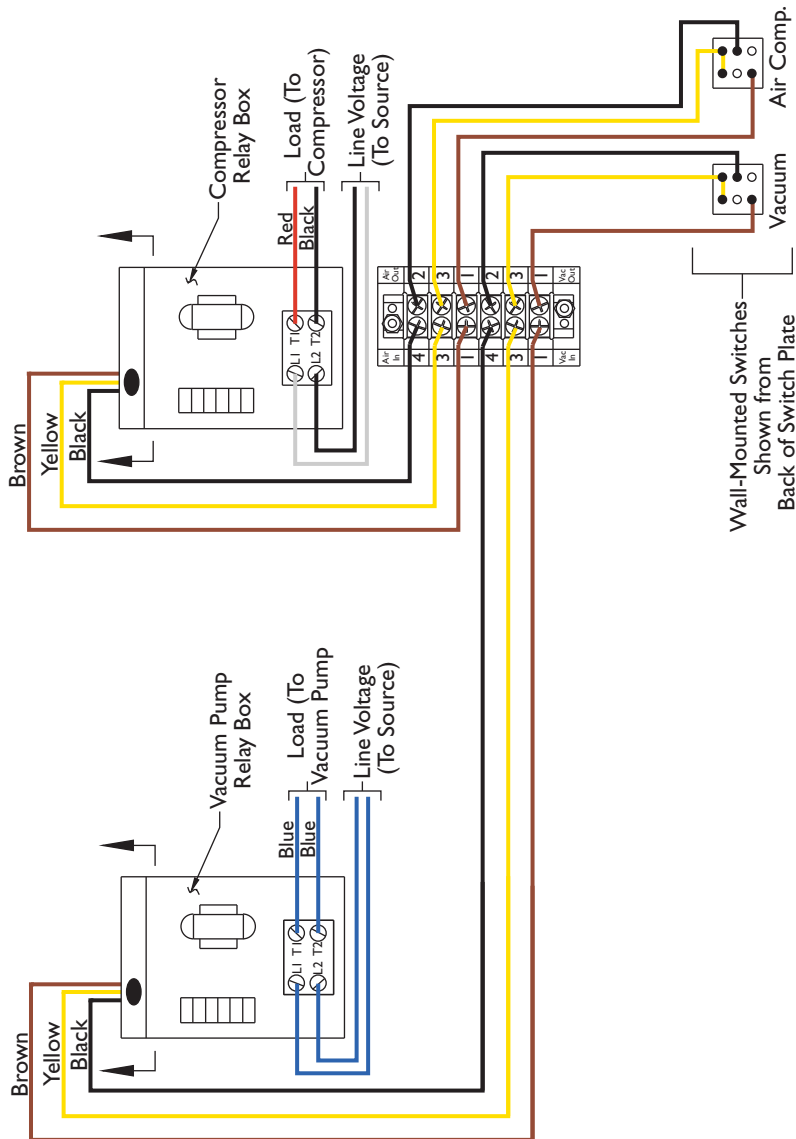
MP - 1800

Two Switch, (Dynamic Dry) Single Vacuum, Air Compressor



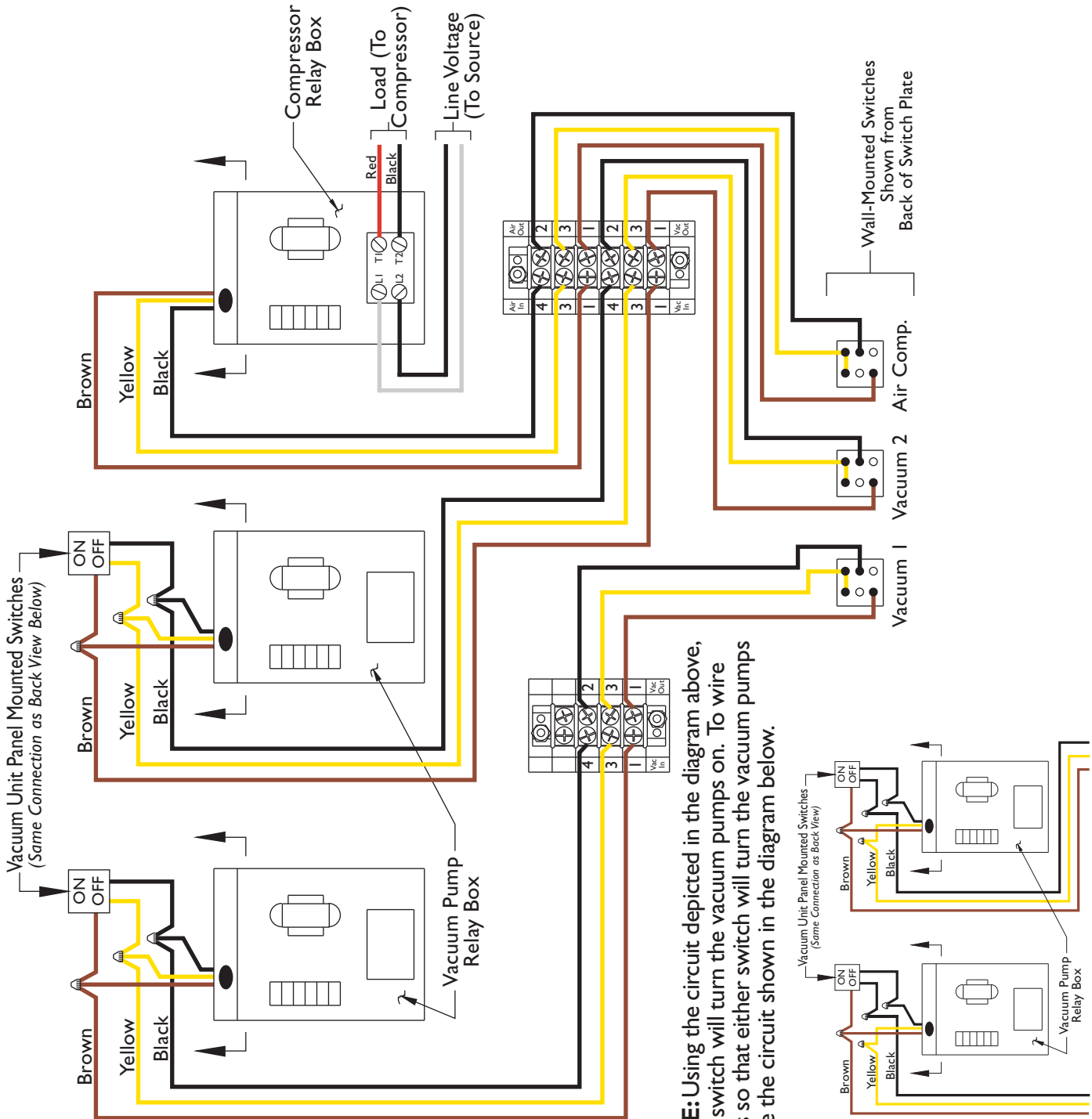
MP - 2000

Two Switch, Single Vacuum, Air Compressor



MP - 2200

Three Switch, Dual Vacuum, Air Compressor



DentalEZ® Group

CustomAir® Division

Master Control Panels

The DentalEZ Group and its employees are proud of the products we provide to the dental community. We stand behind these products with a warranty against defects in material and workmanship as provided below.

In the event that you experience difficulty with the application or operation of any of our products, please contact our customer service department at our expense at 1-866-DTE-INFO (1-866-383-4636).

If we cannot resolve the issue by telephone, we will arrange for a representative to contact you or suggest that the product be returned to our factory for inspection.

If product return or repair is required, we will provide you with a **Return Authorization** number and shipping instructions to return the product to the proper facility. If the product is under warranty, we will ask you to provide proof of purchase, such as a copy of your invoice. Please be sure to include the **Return Authorization** number on the package you are returning. **Products returned without a Return Authorization number cannot be repaired.**

Freight costs for product returns are the responsibility of the customer. Products under warranty will be repaired or replaced, at our sole discretion, and returned at our expense. Products outside the warranty limits will be repaired and returned with costs invoiced to the customer. We are not responsible for shipping damages. We will, however, help you file a claim with the freight carrier. Written repair estimates are available.

DentalEZ warrants the CustomAir Master Control Panels to be free of defects in material and workmanship, under normal usage, for a period of 2 years from date of installation.*

Please note the following additional terms of our warranty and return policy:

- Warranties cover manufacturing defects only and do not cover defects resulting from abuse, improper handling, cleaning, care or maintenance, normal wear and tear or non-observance of operating, maintenance or installation instructions. **Failure to use authorized parts or an authorized repair facility voids this warranty.**
- **Liability is limited to repair or replacement of the defective product at our sole discretion. All other liabilities, in particular liability for damages, including, without limitation, consequential or incidental damages are excluded.**
- THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO EMPLOYEE, REPRESENTATIVE OR DEALER IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR TO GRANT ANY OTHER WARRANTY.

WARRANTY REPAIRS: Parts repaired or replaced on a product that is in warranty will be warranted for the duration of that product's original warranty.

NON-WARRANTY REPAIRS: The warranty on parts either repaired or replaced on an out-of-warranty product will cover the repaired part only and will be for the time frame of a new parts warranty period.

PRODUCT RETURN: Opened products or product returns more than a year old cannot be returned for credit. There will be a 15% (\$25.00 Minimum) restocking charge on all items authorized for return.

** Provided conditions defined in instruction manual are met.*

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