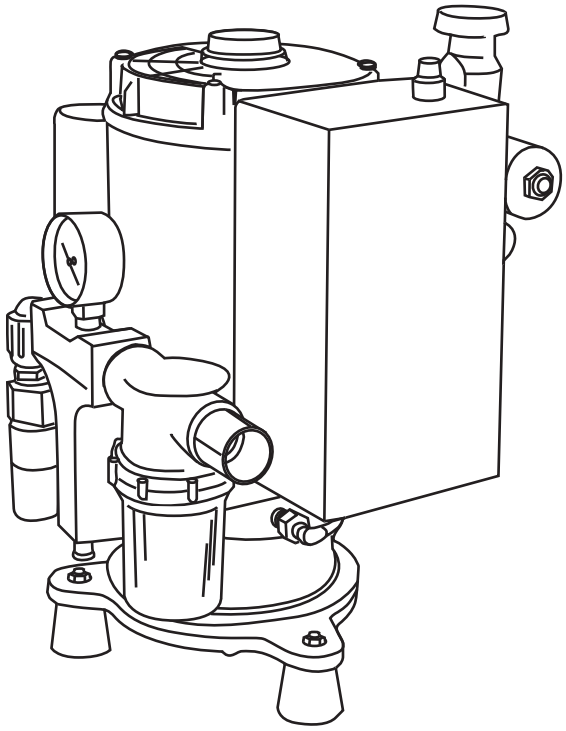
TECHWEST INC



Tech West Liquid Ring Pump

Pre-Installation Guide

All installations must conform to local codes.

Revised 1/16

Junction Box Installation

Box Mounted Control Panel Diagram

A. Mount a three gang junction box to a solid wall stud. It should be placed so that it's front surface is set back 1/2" to 5/8".

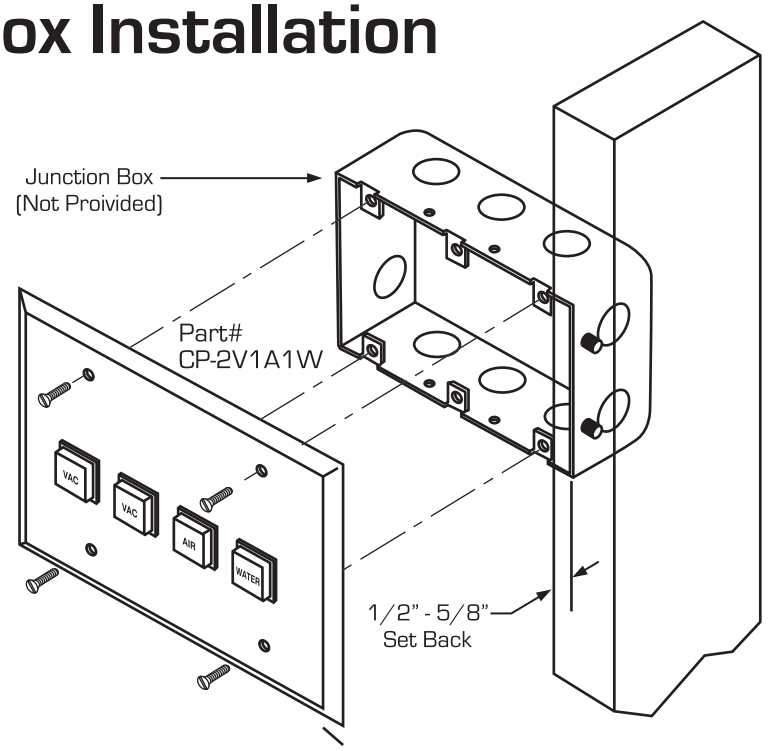
B. Run one 18-3 bell wire from each piece of equipment up to the installed junction box.

C. Cut and install sheet rock.

D. Connectors are provided to complete the wiring of the control panel by connecting wires to corresponding colored wires from the low voltage contactor box(es).

E. Position the panel, then insert and tighten screws.

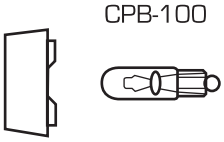
F. 1 & 2 switch panels use 2 switch mud ring box.
3 or more switch panels use 3 switch mud ring box.



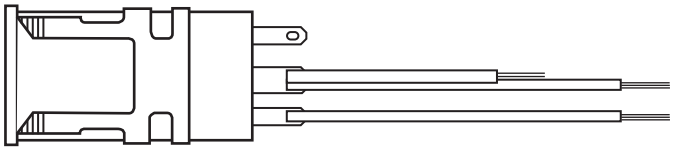
Switch Assembly

Part#
CPLV-100 (vacuum lense)
CPLA-100 (air lense)
CPLH-100 (water lense)

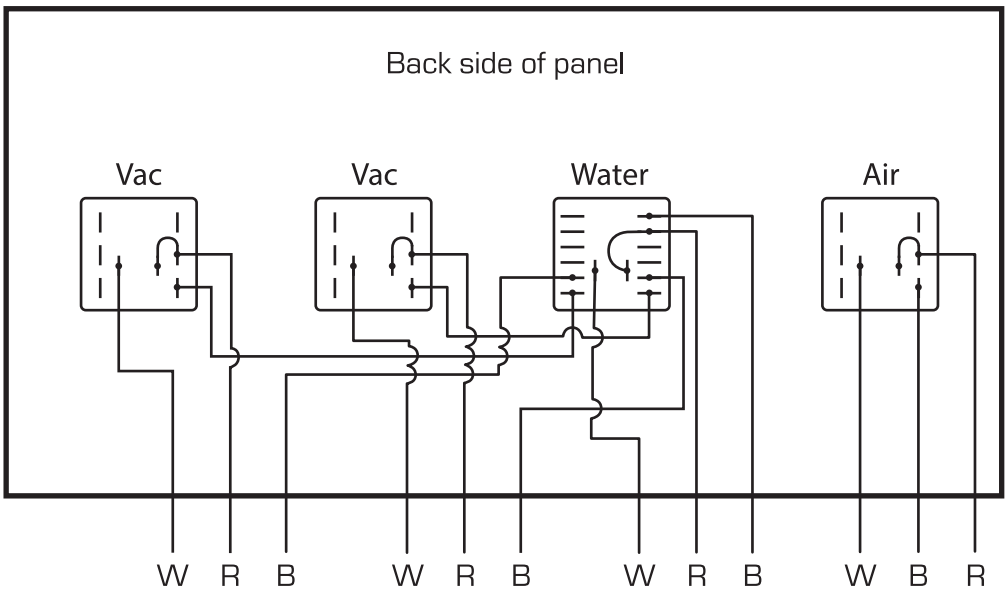
Part#
CPB-100



Part#
CPSV-100 (vacuum switch)
CPSA-100 (air switch)
CPSH-100 (water switch)



Wiring Schematic (4 Switch Panel)

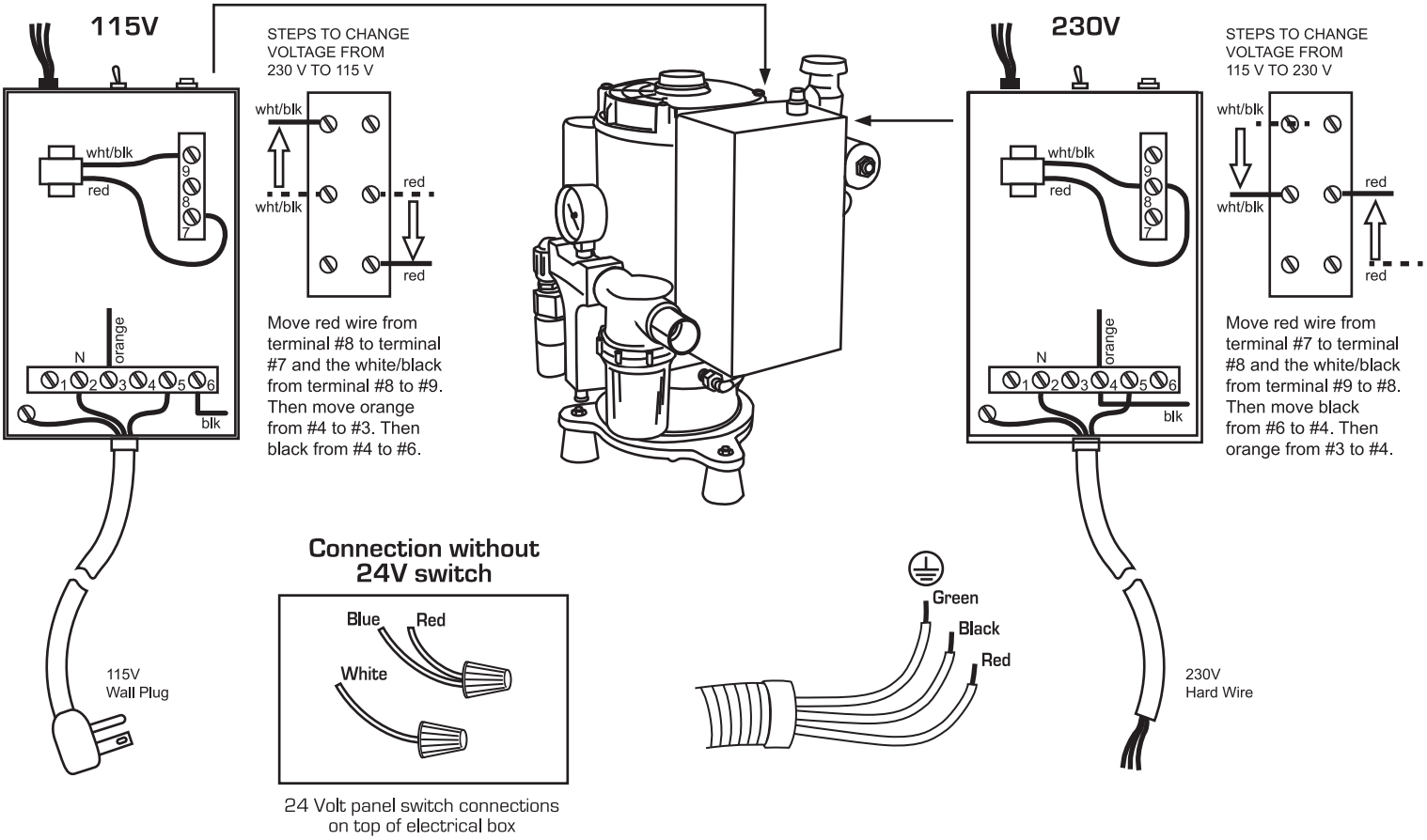


B = Blue
R = Red
W = White

As shown above, control panel equipped with a water control switch are wired such that water switch must be in the "ON" position in order to start the vacuum pump(s). This feature is provided as a standard protective measure to ensure that the vacuum pump(s) are not operated without water and thereby damaged.

In panels without a water switch, the vacuum switch(es) are wired using the same configuration as shown on the air switch above.

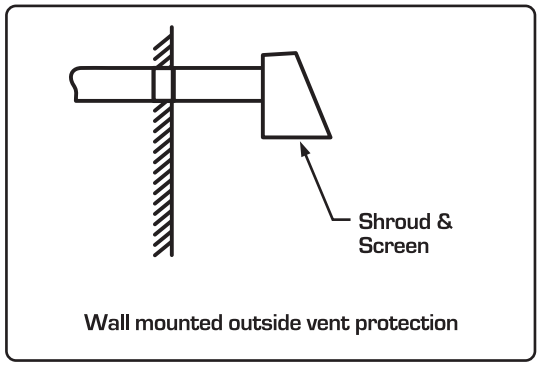
Electrical Connections



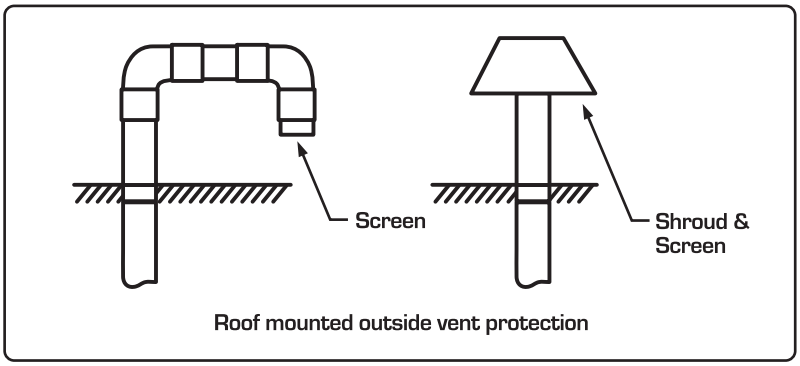
Ventilation Requirements

Equipment Room Temperature
The Tech West Inc. equipment must be used in an environment that is temperature controlled. Room temperature must remain between 40 and 105 degrees Fahrenheit. Adequate forced ventilation must be provided across the equipment by placing an adequate exhaust fan opposite an equivalent air intake vent. The fan should be higher than the associated intake vent.

Exhaust Vent Protection
If the exhaust piping is venting to the outside of the building, precautions must be taken to protect the equipment room from weather elements and animal intrusion. This can be accomplished by using one of the three methods shown below.



Wall mounted outside vent protection

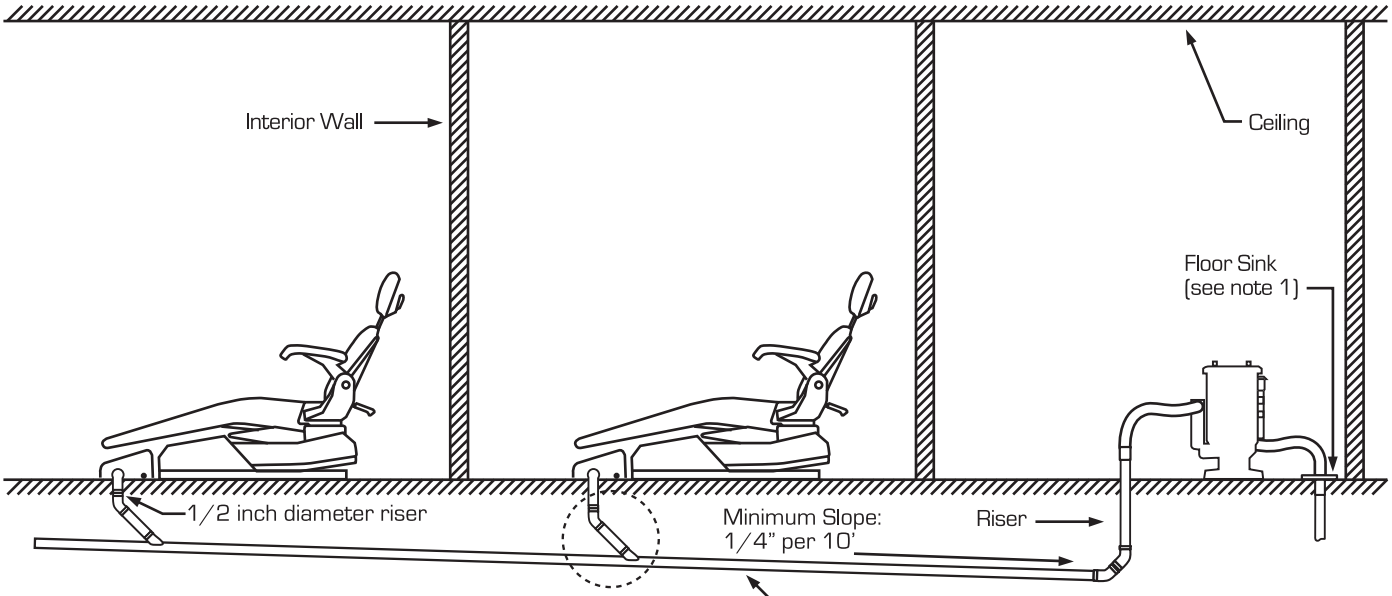


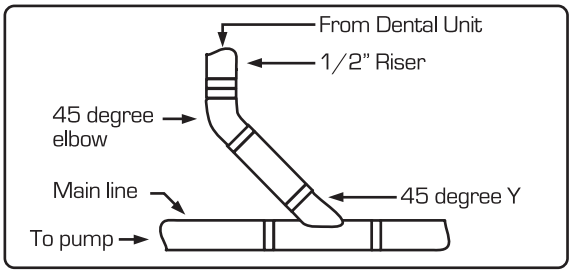
Roof mounted outside vent protection

Make sure to use the correct pipe type for associated system

Plumbing Installation

Sub Floor Installation: The sub-floor plumbing layout shown below is the recommended layout for Tech West Inc. system installations and should be used whenever possible.





Riser to Main Line Detail

Notes:

1 See optional drain connections shown below

2 8 foot maximum height from main line to pump

3 Consult dental unit manufacturer's guidelines for correct reduced size and height of termination of vacuum line inside junction box.

4 Limit branches. Orient main line under junction box or cabinet

5 When main line is 1 1/2" ID or larger, use 45 degree Y's and elbows only.

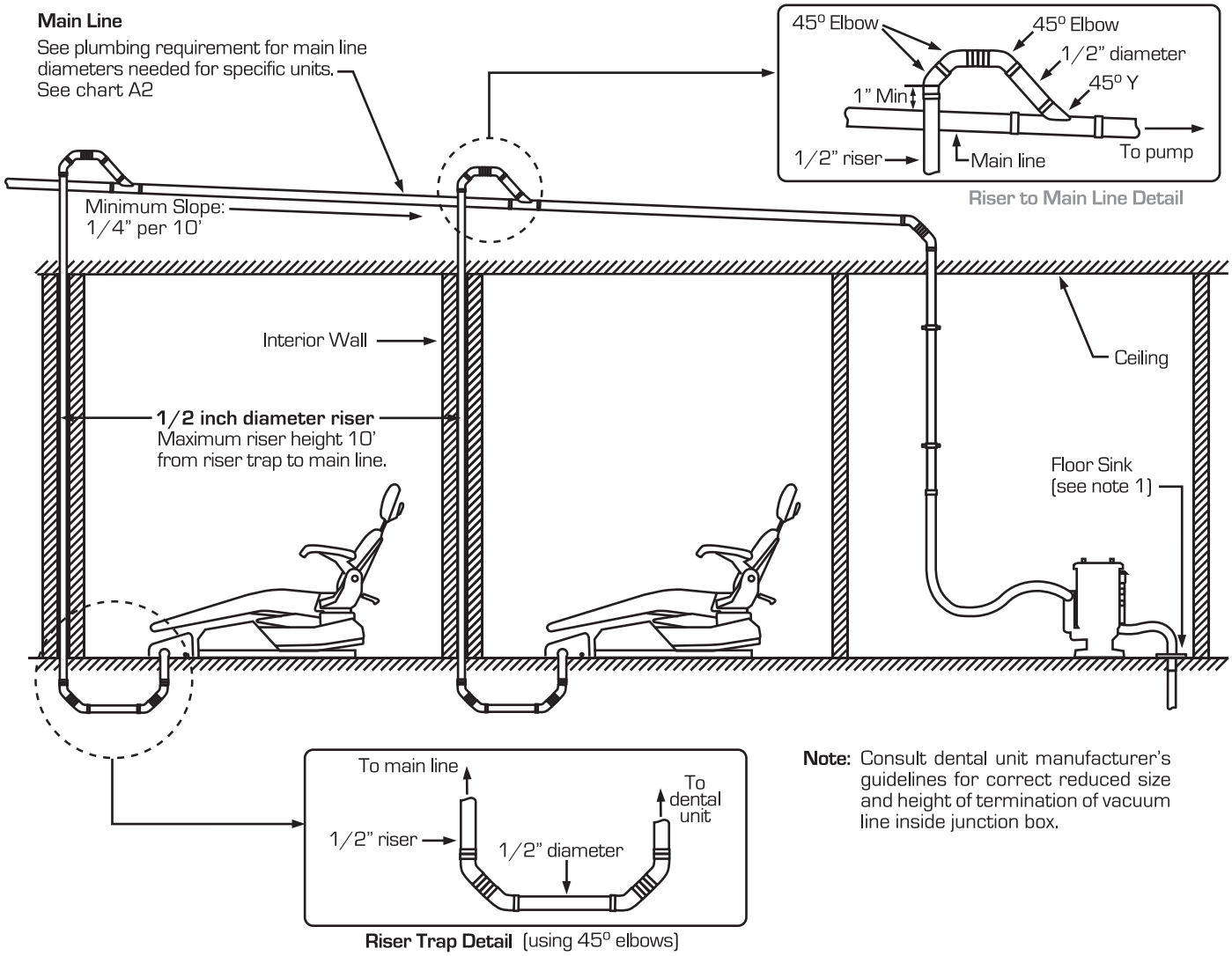
6 Long radium 90 degree elbows can be used as alternates to 45 degree elbows.

7 A total of 8 feet of 3/4 inch hose is supplied with Tech West Inc. units. This hose must be shared between inlet and drain.

All installations must conform to local codes

Plumbing Installation

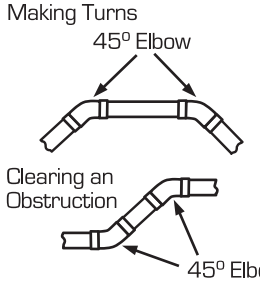
Overhead Installation: The overhead plumbing layout shown below is the alternate layout for Tech West Inc.'s system installation and should be used only when unable to use the sub-floor plumbing layout.



Note: Consult dental unit manufacturer's guidelines for correct reduced size and height of termination of vacuum line inside junction box.

Connection Details All Installations

Main Line

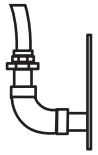


A. Use only 45° elbows or sweeping (sanitary) 90° elbows to make turns in main line.

B. If piping is diverted to clear an obstruction, **DO NOT MAKE A TRAP**.

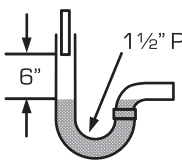
Drain Options

Direct connection to vented drain. No traps before vent.



Closed Vented Drain

Indirect connection (Air gap) with a P-trap.

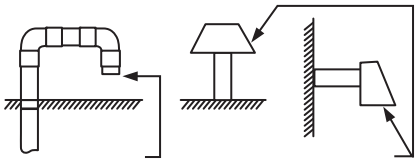


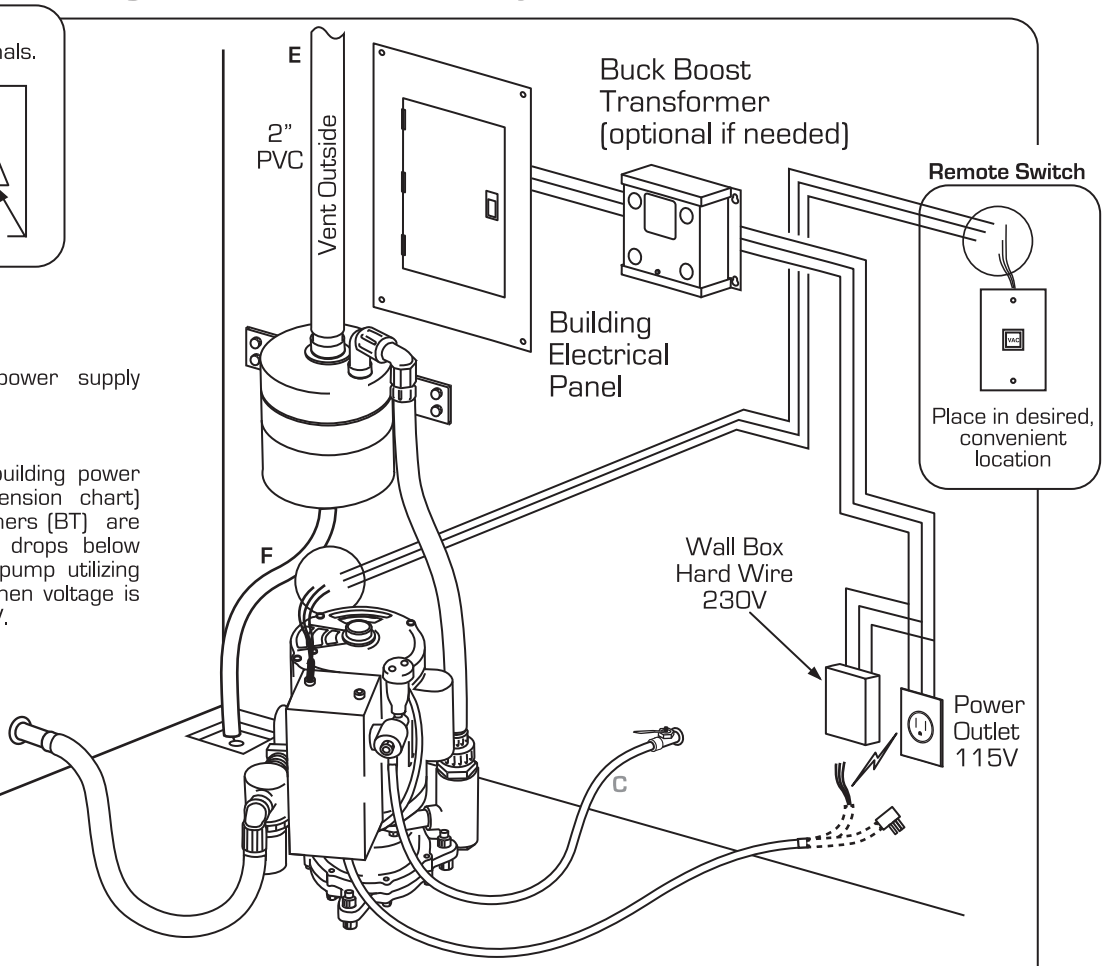
Open Drain Pipe

Target Room Layout

Outside Air Pipe

2-inch pipe for air intake.
Must be protected from rain and animals.

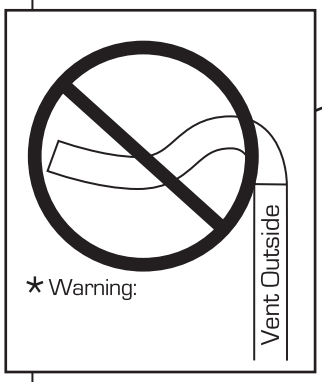




Important Information

A. Safty First -
Always disconnect main power supply before installation.

B. Wire or Plug in -
Wire or plug in outlet to building power supply. (see product deimension chart) NOTE: Buck boost transformers (BT) are only requred when voltage drops below 208V or above 240V. On pump utilizing 115v BT is only required when voltage is below 110V and above 120V.



Main Vacuum Line

Chart A2 **Vacuum Line Pipe Diameter**

Operatories	PVC sch 40	Copper
1	3/4"	3/4"
2	1"	1"
3	1 1/4"	1"
4	1 1/4"	1 1/4"
5	1 1/4"	1 1/2"
6	1 1/4"	1 1/2"
7	1 1/2"	1 1/2"
8	1 1/2"	1 1/2"
9	1 1/2"	2"
10	2"	2"
11	2"	2"
12	2"	2"

Electrical Information

C. All vacuum pumps need to have dedicated circuit breakers. For breaker size and electrical connection type please refer to the product specifications / Dimensions chart on last page.

Water Plumbing Connection

D. 1/4 FNPT Shut-off valve and 5ft. pressure hose (supplied)

E. 9ft of Flexible PVC hose 3/4" supplied.

F. Exhause needs to be vented outside with 2" schedule 40 PVC pipe.
* Warning: Avoid any bends resuling in a downward slope. Condensation could cause water to collect in vent pipe. (See diagram abover)

G. Open floor sink - use 3/4" flexible PVC hose.

Service Clearances

H. Allow 12" on all sides for all units

Ambient Tempertures

H. Must not exceed 105°F Must remain above 41°F

Product Dimensions

WHIRLWIND PUMP

MODEL	USERS	VOLTAGE	BREAKER	H.P.	HEIGHT	DEPTH	WIDTH	WEIGHT
VPL2SS	2	115/230	20	1	16	13	13	59
VPL2SSR	2	115/230	20	1	16	13	13	59
VPL3SS	3	115/230	20	1.5	18	13	13	66
VPL3SSR	3	115/230	20	1.5	18	13	13	66
VPL4S2	4	208/230	20	2	18	13	13	66
VPL4S2R	4	208/230	20	2	18	13	13	66
VPL4D2	4	208/230	2 X 20	2 X 1	30	20	30	171
VPL4D2R	4	208/230	2 X 20	2 X 1	30	20	30	171
VPL6D2	6	208/230	2 X 20	2 X 1.5	30	20	30	180
VPL6D2R	6	208/230	2 X 20	2 X 1.5	30	20	30	180
VPL8D2	8	208/230	2 X 20	2 X 2	30	20	30	182
VPL8D2R	8	208/230	2 X 20	2 X 2	30	20	30	182
VPL6T2	6	208/230	3 X 20	3 X 1	30	20	41	255
VPL6T2R	6	208/230	3 X 20	3 X 1	30	20	41	255
VPL9T2	9	208/230	3 X 20	3 X 1.5	30	20	41	260
VPL9T2R	9	208/230	3 X 20	3 X 1.5	30	20	41	260
VPL12T2	12	208/230	3 X 20	3 X 2	30	20	41	264
VPL12T2R	12	208/230	3 X 20	3 X 2	30	20	41	264

GOLDEN VAC PUMP

MODEL	USERS	VOLTAGE	BREAKER	H.P.	HEIGHT	DEPTH	WIDTH	WEIGHT
VPLG3SS	3	115/230	20	1	18	13	13	69
VPLG3SSR	3	115/230	20	1	18	13	13	69
VPLG5SS	5	115/230	20	2	18	13	13	69
VPLG5SSR	5	115/230	20	2	18	13	13	69
VPLG6D2	6	208/230	2 X 20	2 X 1	30	20	28	188
VPLG6D2R	6	208/230	2 X 20	2 X 1	30	20	28	188
VPLG10D2	10	208/230	2 X 20	2 X 2	30	20	28	188
VPLG10D2R	10	208/230	2 X 20	2 X 2	30	20	28	188
VPLG15T2	15	208/230	3 X 20	3 X 2	30	20	41	273
VPLG15T2R	15	208/230	3 X 20	3 X 2	30	20	41	273

ECOPUMP

MODEL	USERS	VOLTAGE	BREAKER	H.P.	HEIGHT	DEPTH	WIDTH	WEIGHT
ESL2S	2-3	208/230	20	1	19	13	13	59
ESL4D	4-6	208/230	2 X 20	2 X 1	30	20	30	166
ESL5S	4-5	208/230	20	2	19	13	13	59
ESL10D	8-10	208/230	2 X 20	2 X 2	30	20	30	166