

Dansereau Dental Equipment Installation Schematics

Precision **Wet** Vacuum Systems

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DHP Wet Vacuum Specifications

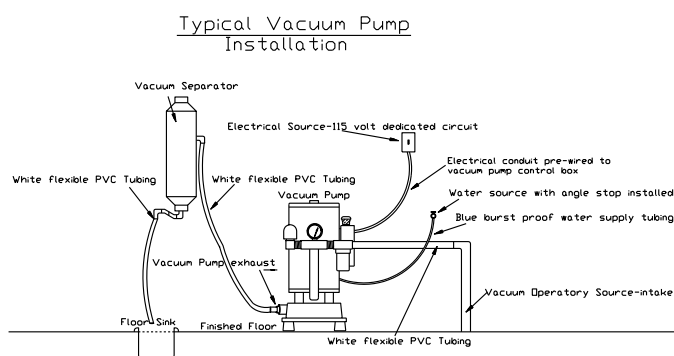
VACUUM PUMP SYSTEM

The Vacuum Pump system is installed in a Utility Room in the typical dental office and is primarily used for oral evacuation of debris from the patients mouth. Recent changes in the industry have required manufacturers to add accessory items in order to properly meet upgraded and current installation standards as noticed by Uniform Building Codes. Below are listed items that may pertain the installation of the vacuum system in your dental office.

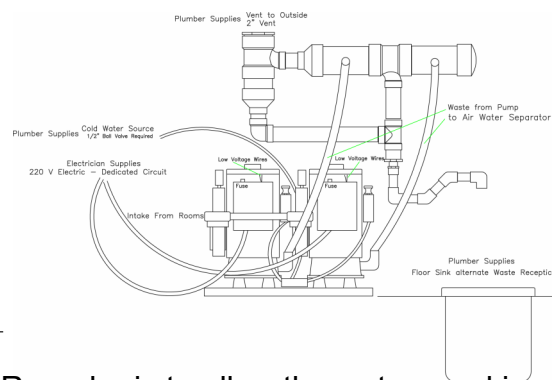
1) Air/Water Separator: The function of an Air/Water Separator is to allow the liquid waste evacuated from the patients mouth to be separated from the air born particles. The Air/Water Separator is installed after the vacuum pump and before eth drain or floor sink. A 2" vent pipe is required for correct installation of the separator.

Picture Below: VERIFY 1 HP or 2 HP DUAL SYSTEM PRIOR TO INSTALLATION.

1HP Air / Water Separator



2HP Air Water Separator



2) Water Recycler: The function of the Water Recycler is to allow the water used in the operation of the Vacuum Pump to be re-used, thus reducing the water usage in the dental office.

3) Boost Transformer: The function of the Boost Transformer is to increase the incoming line voltage to the Vacuum Pump. The voltage in some areas may be below the required level to properly operate the Vacuum Pump. All Vacuum Pumps require a 120volt or 208volt incoming electrical source, if the power source fluctuates or does not meet this requirement a Boost Transformer will be required. It is rare to not have adequate voltage within the USA or North America. Refer to a licensed electrician if you have questions regarding your power source. *Typically not needed with DHP Precision Wet Vacuum Pump.*

DHP Wet Vacuum Specifications

Installation Requirements:

- 1) 5" x 5" Utility Room requires No Less Than 5 Air Changes Per Hour with Ventilation Fan
- 2) Dental Vacuum Pumps cannot be installed in Patient Care Area. Dental Vacuum Pumps have a Potential Risk of Safety Hazard and consideration must be taken to ensure Vacuum Pump must not be installed adjacent to Patient Care Area. It is recommended the Utility Room has a lock only permitting staff and authorized personnel entrance to room.
- 3) Dental Vacuum Pump Requires Dedicate Electrical Circuit (Refer to Chart Below for specifications). Vacuum Pump requires 6 inch clearance from adjacent structures or walls.

Electrical and Plumbing Requirements: Refer to Chart Below:

Electrical	DHP101	DHP202	DHP303
Voltage Rating	*110/230 - 60Hz	230 - 60Hz	230 - 60Hz
Voltage	*110/125 - 60Hz	208/240 - 60Hz	208/240 - 60Hz
Internal Compressor Fuse Rating	1.5Amp	1.5Amp	1.5Amp
Min/Max	208/240 - 60Hz		
Electrical Panel Breaker Size	20Amp	20Amp	30Amp
Full Load Amps	*16/8	13.4	21.6
Cubic Feet Per Minute	14	22	34
Water			
Inlet Water Pressure PSI	20-100	20-100	20-100
Flow Rate Per Pump (Gal.Min)	1	2	3
Water Temp (*F)	40-75	40-75	40-75
Vacuum Level			
Preset at Factory (In Hg)	10 to 12	10 to 12	10 to 12
Shipping Weight (lbs)	68	85	160
Dimensions (H"XW"XD")	14x11x11	17x11x11	22x28x16

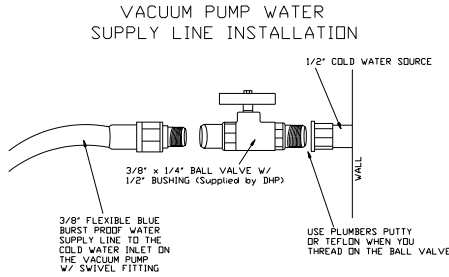
Low Voltage: The Vacuum Pump has a Low Voltage ON/OFF capability. A 3/18 low voltage rated wire can be run from one central location to allow the Vacuum Pump to be turned on and off.

Plumbing Requirements:

1) Cold Water Line: 1/2" Cold Water line is required for proper operation of any DHP Vacuum System. A 1/2" Female Ball Valve is required to install the cold water line from the Vacuum Pump to cold water source (Water Line Supplied by Dansereau). All Dansereau Vacuum Pumps have a Recognized Backflow Device installed to ensure no cross contamination of the Vacuum Pump to the Public Water Source, however it has been noted that some Building Departments are requesting a secondary backflow system be installed by the contractor.

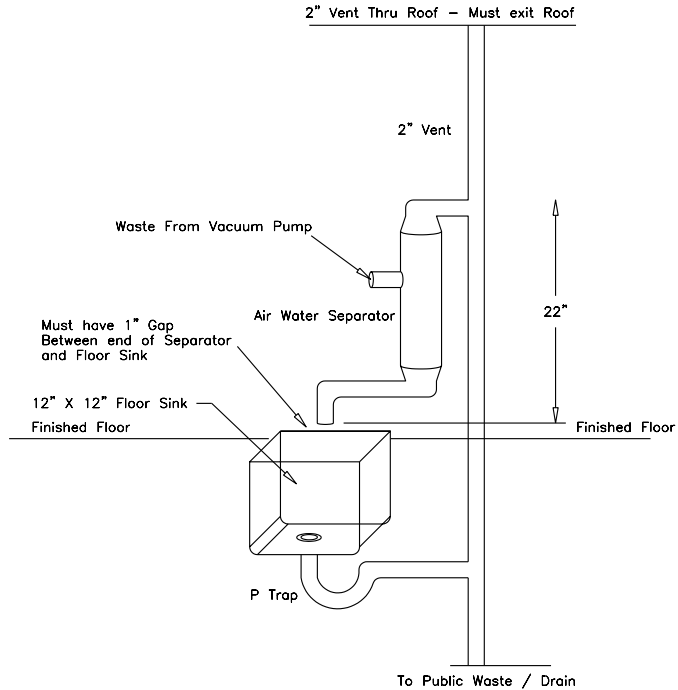
DHP Wet Vacuum Specifications

Typical Utility Room Schematics



NOTE:

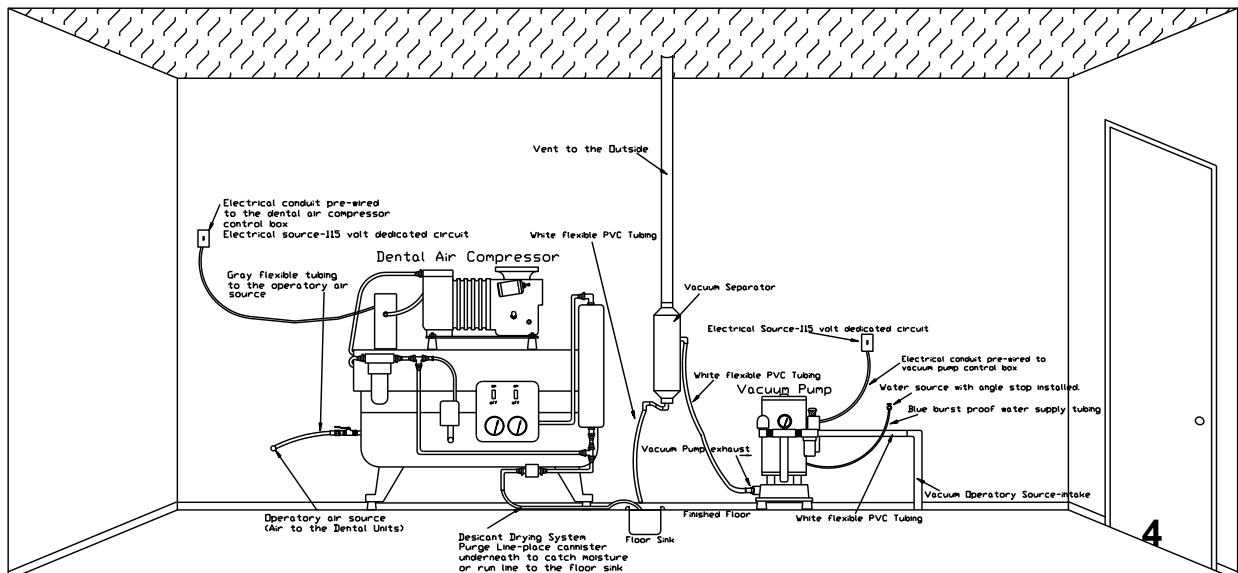
This is a Typical Utility Room configuration. Use this as a basic format for designing your Utility Room. Key elements are appropriate electrical and plumbing specs. need to be met, placement of electrical and plumbing can be modified if needed. Contact Dansereau to verify modifications prior to installation of electrical and plumbing connections.



Note:

This is a 1 HP Vacuum Air Water Separator refer to page 3 for Dual 2 HP Systems

Typical Dental Equipment Room Design

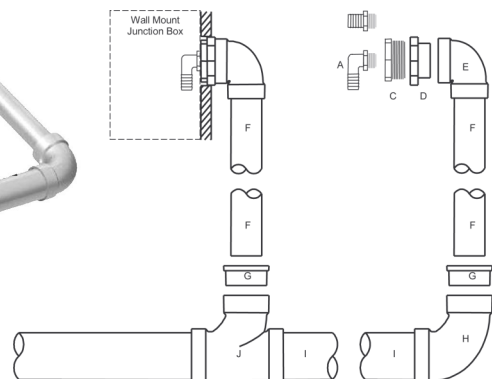
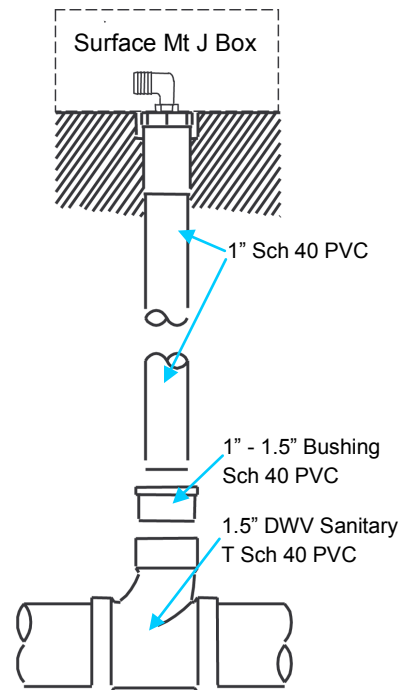
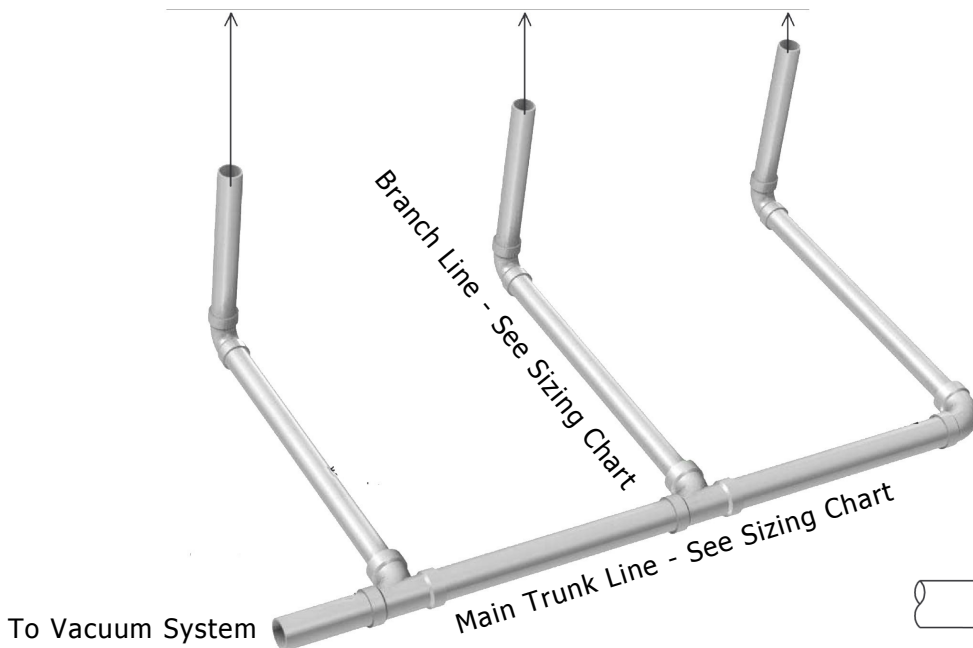


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Vacuum Line: See Chart Below.

Dansereau Health Products, Inc. strongly recommends Schedule 40PVC for use as the Vacuum Line. However, be aware some Building Codes require a metal type vacuum line and require Copper as the Vacuum Line. Copper will eventually deteriorate over years of service, Schedule 40 PVC will not. NOTE: IF YOUR VACUUM LINE INSTALLATION IS OUTSIDE THE SCOPE LISTED BELOW CONTACT DANSEREAU FOR SPECIAL INSTRUCTIONS.

Operatory Termination - See Vacuum Sizing Chart for Specs.



Site Requirements: Environment Conditions

Operating Conditions - Indoor use at altitudes up to 2000M.

Temperature 5 to 40 Degrees C (41 to 104 F)

Maximum relative humidity 80% for temperatures up to 31 C, decreasing linearly to 50% relative humidity to 40C.

Supply Voltage fluctuation of +/- 10% of nominal voltage.

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Not suitable for use in the presence of a flammable anesthetics mixture with air or with oxygen or nitrous oxide.

Class 1 Installation Category

Ordinary equipment (IPXO). Does not protect against ingress of water.

Unit is suitable for continuous operation.

DHP Wet Vacuum Specifications

Vacuum Line Sizing Guide is recommended specifications. In order to ensure quality vacuum performance reduce the amount of angled fittings and bends in the piping system and make every effort to provide a 1/4" Grade Per Foot.

DHP 101	DHP 202 * Dual	DHP 303 * Triple
HVE's + SE's	HVE's + SE's	HVE's + SE's
2 + 0	3 + 0	4 +
1 + 1	2 + 2	3 + 2
0 + 4	1 + 4	2 + 4
	0 + 6	1 + 5

NOTES:

HVE= High Volume Evacuator

SE= Saliva Ejector

* These combinations apply if all pumps are running together.

If only one pump is running, Sizing Guide for DHP 101 applies.

Vacuum Line Sizing Chart		
NUMBER OF OPERATORIES	VACUUM LINE PVC sch 40	PIPE DIAMETER RISER DIAMETER
1	1 "	1
2	1 "	1
3	1"	1
4	1 "	1
5	1 1/4"	1
6	1 1/4"	1
7	1 1/2"	1
8 to 12	2"	1

NOTE: Wet Vacuum Systems are not recommended over 7 operatories