

DENTAL VACUUM SYSTEMS

PRE-INSTALLATION GUIDE FOR MODELS VS50NEO & VS80NEO

Check VacStar NEO Model Being Installed:





□ VS50NEO □	VS80NEO
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Doctor:	
Address:	
Phone#:	
Dealer:	
Dealer Address:	

PRODUCT SPECIFICATIONS

Electrical	Model VS50NEO	Model VS80NEO
Voltage Rating (VAC)	220	220
Voltage Min./Max. (VAC)	198/242	198/242
Frequency Single Phase (Hz)	50/60	50/60
Full Load (Amps)	20	28
Water		
Inlet Water Pressure (PSI)	20 - 100	20 - 100
Flow Rate (gal/min) per Pump	0.13	0.13
Inlet Water Temperature (°F)	40 - 75	40 - 75
Vacuum Level		
Preset at Factory (in Hg)	10	10

All installations must conform to local codes.

PHYSICAL CHARACTERISTICS

Model VS50NEO		Model VS80NEO		
Height	21 inches (53 cm)	Height	21 inches (53 cm)	
Width	28 inches (71 cm)	Width	28 inches (71 cm)	
Depth	18 inches (46 cm)	Depth	18 inches (46 cm)	
18 in.	28 in.	21 in.	28 in.	
	Note: Dimensi	ons are +/- ½"		
Shipping Weigl	nt: 175 lbs. (79 kg)	Shipping Weigl	nt: 175 lbs. (79 kg)	

ELECTRICAL CONNECTIONS

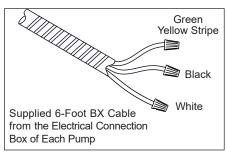
220V Connections:

- Each pump has its own 6-foot BX cable pre-wired to the electrical connection box for direct wiring to dedicated 220VAC, single phase 50/60 Hz circuit via a disconnect box with approved ground.
- Disconnect box should be mounted no more than 3 feet of each other and 3 feet of installation center line.
- The supplied cable is pre-wired in the electrical box of each pump. Connect cable wires by matching color.

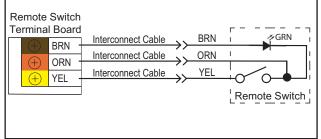
Important: When not connecting a 24VDC remote switch, the ORG and YEL wires must be tied together and the BRN wire insulated for pump operation.

24VDC Connections:

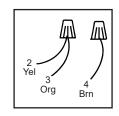
- 24VDC Connections are used when installing a 24VDC remote switch. They are made via a supplied interconnect cable that is also pre-wired to the electrical connection box of each pump.
- ☐ Make the 24VDC connections shown below for the remote switch. When not using the remote switch, insulate the BRN wire and tie the ORG and YEL wires together.







24VDC Connections

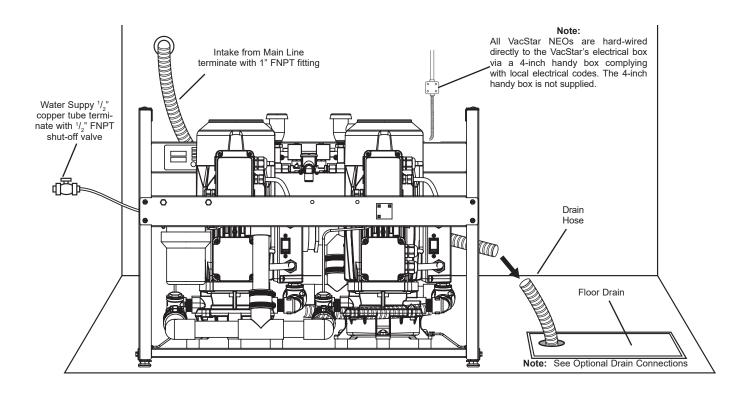


Connection without 24VDC Switch

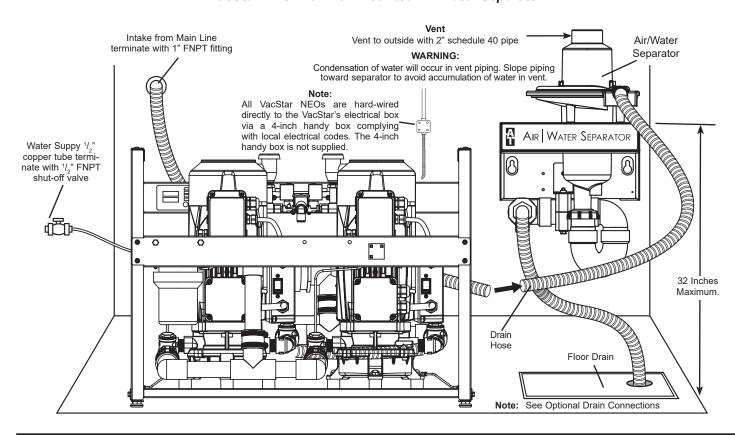


UTILITY ROOM CONFIGURATION

VacStar NEO without Wall-Mounted Air/Water Separator

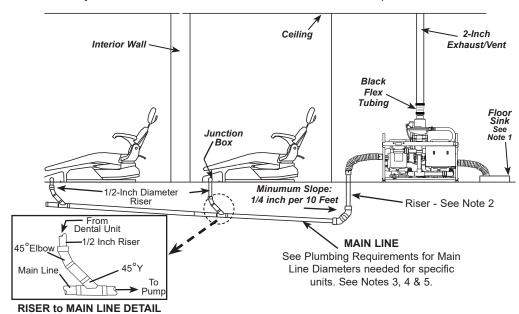


VacStar NEO with Wall-Mounted Air/Water Separator



PLUMBING INSTALLATION

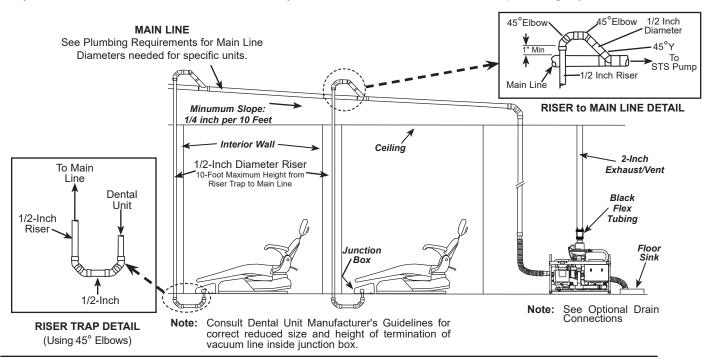
SUB FLOOR INSTALLATION - The sub-floor plumbing layout shown below is the **recommended** layout for VacStar system installations and should be used whenever possible.



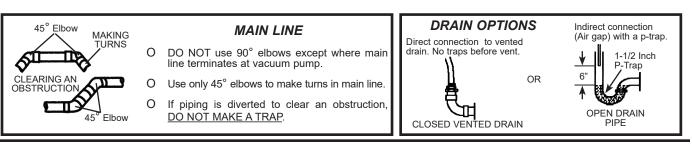
Notes: 1. See Optional Drain Connections shown below.

- 2. 8-Foot Maximum Height from Main Line to pump.
- 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" I.D. or larger, use 45° Y's and elbows only.
- 6. Long radius 90° elbows can be used as alternates to 45° elbows.

OVERHEAD INSTALLATION - The overhead plumbing layout shown below is the alternate layout for VacStar system installations and should be used only when unable to use the sub-floor plumbing layout.



CONNECTION DETAILS ALL INSTALLATIONS -



SITE REQUIREMENTS

Electrical	VS50NEO		VS80NEO	
Connection Option	Two 15A Services	Single 30A Service	Two 20A Services	Single 40A Service
Minimum Circuit Breaker Rating	15A, Qty 2	30A, Qty 1	20A, Qty 2	40A, Qty 1
Minimum Wire Gauge Size	14 AWG, Qty 2	10 AWG, Qty 1	12 AWG, Qty 2	8 AWG, Qty 1
220-Volt Buck/Boost Transformer	#67002 (3.9 KVA), Qty 2	#67000-1 (7.8 KVA), Qty 1	#67002 (3.9 KVA), Qty 2	#67000-1 (7.8 KVA), Qty 1
Plumbing				
Note: Suction piping must slope at least a ¼" for each 10 feet of run towards the pump. Use PVC Schedule 40 or Copper Type M.				
Minimum CFM @ 0" Hg	30		40	
Air Exhaust with Air/Water Separator	2" schedule 40 pipe		2" schedule 40 pipe	
Overhead Plumbing				
Main Line Diameter (Min./Max. ID in inches)	1 1/4 to 2"		1½" to 2"	
End Fitting	3/4 " FNPT		3/4 " FNPT	
Overhead Main Line	½" ID		½" ID	
Floor Plumbing				
Main Line Diameter (Min./Max. ID in inches)	1 1/4 to 2"		1½" to 2"	
End Fitting	3/4 " FNPT		3/4 " FNPT	
Branch Line Diameter (Min./Max. ID in inches)	3/4" to 1½"		1 to 1½"	
Environmental				
Ambient Temperature (See ventilation requirements below.)	40 to 104°F (5 to 40°C)		40 to 104°F (5 to 40°C)	

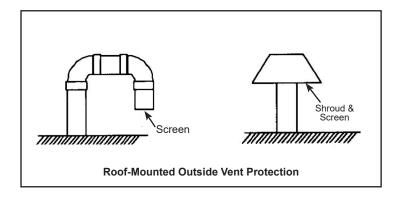
VENTILATION REQUIREMENTS

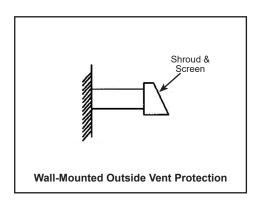
Equipment Room Temperature

The VacStar NEO equipment must be used in a controlled temperature environment. Maintain equipment room temperature between 40 and 105 degrees Fahrenheit. Adequate forced ventilation must be provided across the unit by placing an appropriate 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.





Unit	Watts (Idle)	Watts (Max)	BTU/Hr (Idle)	BTU/Hr (Max)
VS50NEO	1,451	2,732	2,346	4,112
VS80NEO	1,451	4,099	2,346	8,774

Make sure to use the required pipe type for associated system

NOTES

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Utility Room

- Dry Vacuums
- Wet Vacuums
- Air Compressors
- Amalgam Separator
- Utility Accessories
- Utility Packages

Merchandise

- Surface Disinfectant
- Enzymatic Cleaner
- Hand Sanitizer and Lotion
- Waterline Cleaner
- Evacuation System Cleaner
- Imaging Accessories
- Chemistry
- Processor Accessories

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