



Containerized Vacuum Station

Application

Airvac's Containerized Vacuum Station is ideally suited for those who need an inexpensive solution for a small project, an initial phase of a development or for a variety of other applications such as camps, FEMA housing, etc. This concept can be used either as a permanent solution or as a temporary solution when phasing of a project is being considered.



Plug & Play Concept

Airvac's Containerized Vacuum Station is a complete vacuum station with all components located inside a shipping container. The equipment includes the collection tank, vacuum pumps, sewerage pumps and control panel.

- The collection tank size is either 1000 gallons or 1500 gallons
The size of the vacuum pumps varies according to peak flow (gpm) and pipe volume (gal)
- The size of the sewerage pumps varies according to peak flow (gpm) and head conditions (TDH)
- The Container size is the same in all models (30 foot) to be constructed on site

Advantages

Airvac's Containerized Vacuum Station offers these advantages:

- No need for a custom designed vacuum station
- Contractor's effort is minimized
- Significant cost savings compared to a custom designed vacuum station that requires a building to be constructed on site
- Can be used as a permanent solution or as a temporary solution when phasing of a project is being considered. In the latter case, the containerized station can be moved to another location

Models

Model #	Max Peak Flow; Max # conn	Tank Size	Vacuum Pumps
Container V1-103	65 gpm; 100 connections	1000 gallons	2-103 cfm
Container V1-165	65 gpm; 100 connections	1000 gallons	2-165 cfm
Container V2-165	200 gpm; 300 connections	1500 gallons	2-165 cfm
Container V2-277	200 gpm; 300 connections	1500 gallons	2-277 cfm

Limitations

The maximum allowable pipe volume of each Containerized Vacuum Station model has a corresponding maximum allowable pipe footage. This depends on the mixture of 4" and 6" vacuum main. The lower range shown below assumes 90% of the pipe footage is 6" while the upper range assumes that 90% of the pipe footage is 4".

Model #	Max Pipe Volume	Max Pipe Footage
Container V1-103	8,800 gallons	6,500 lf - 11,500 lf
Container V1-165	15,000 gallons	10,900 lf - 19,900 lf
Container V2-165	14,100 gallons	10,200 lf - 18,700 lf
Container V2-277	25,300 gallons	18,200 lf - 33,500 lf

The container can be installed at grade or partially buried as long as the equipment is above the 100 year flood level. Multiple "lifts" will be required at the vacuum station in order for the incoming vacuum mains to connect to the top portion of the collection tank which in turn will limit the number of lifts on the remainder of the collection system. Below are general guidelines regarding the approximate length of the longest vacuum main to keep static loss under 13 ft.

Station bury depth	Approximate static loss @ vacuum station	Approximate static loss available for collection system	Approximate maximum length of longest line
On-grade	9 ft	4 ft	3,000 lf
2 ft bury	7 ft	6 ft	4,500 lf
4 ft bury	5 ft	8 ft	6,000 lf



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