

MEDICAL VACUUM SYSTEM

Medical vacuum systems are designed to supply medical vacuum to medical gas pipeline systems in medical facilities.

AmcareMed medical vacuum pump system fully meets ISO 13485 and ISO 7396 standards, equipped with multiple rotary vane or claw type vacuum pumps, a receiver tank and a control panel.

Our vacuum system is equipped with 2 to 4 vacuum pumps. The vacuum pump is available in both oil-lubricated and oil-free type. Each pump includes oil level sight glass, anti-suck-back valve filter. Available in two configuration types: vertical tank and horizontal tank mount.



Rotary Vane Vacuum Pump

Rotary vane pumps have been widely used in hospital and laboratory applications for many years. They are efficient, very easy to service, and are field repairable.



Tank

The vacuum tank is used to separate the water in the gas and stabilize the system pressure. It is equipped with pressure gauge and drain valve.



LCD Control Panel

The contactor in the electrical components installed in the electric control box adopt Schneider. The control system is provided with protection devices such as overvoltage and overload.

The control screen can realize: reliable protection of the vacuum pump, automatic or manual control of the opening and stopping of the vacuum pump, the pressure set point can be modified.



Oil-Lubricated Rotary Vane Vacuum System

The oil-lubricated rotary vane vacuum pump is a durable long-life pump that has been used for many years in hospital and laboratory applications.

The use of oil facilitates higher efficiency of the pump, lower operating temperatures and lower sound levels. Oil-sealed rotary vane pumps are ideal for most hospital applications.

Features

- Built-in oil mist filter, the air discharged does not contain oil mist.
- Strong air extraction, ultimate vacuum degree can reach 0.01 Mbar (1Pa)
- The vacuum pump is lubricated with lubricating oil and has a long service life
- Low noise, low vibration, and the working environment will not be affected
- Excellent rust and corrosion resistance, can form an effective anti-corrosion film on the metal surface

Model

System	Model	HP Each	KW Each	System Capacity		Receiver Tank Capacity (L)	Noise dB(A)
				L/min	m ³ /h		
Horizontal Tank Mount							
Duplex	VOL10D-500H	1 x 2	0.75 x 2	350	21	500	62
	VOL15D-500H	1.5 x 2	1.1 x 2	666	40	500	64
	VOL20D-500H	2 x 2	1.5 x 2	1050	63	500	65
	VOL30D-500H	3 x 2	2.2 x 2	1666	100	500	66
	VOL50D-500H	5 x 2	4 x 2	2666	160	500	71
Vertical Tank Mount							
Duplex	VOL30D-500V	3 x 2	2.2 x 2	1666	100	500	66
	VOL50D-500V	5 x 2	4 x 2	2666	160	500	71
	VOL65D-500V	6.5 x 2	4.8 x 2	3333	200	500	73
	VOL75D-500V	7.5 x 2	5.5 x 2	4166	250	500	73
	VOL100D-500V	10 x 2	7.5 x 2	5000	300	500	75
	VOL250D-1000V	25 x 2	18.5 x 2	10500	630	1000	80
Vertical Tank Mount							
Triplex	VOL65T-500V	6.5 x 3	4.8 x 3	6666	400	500	76
	VOL75T-500V	7.5 x 3	5.5 x 3	8332	500	500	77
	VOL100T-1000V	10 x 3	7.5 x 3	10000	600	1000	78
	VOL250T-1000V	25 x 3	18.5 x 3	21000	1260	1000	82
Vertical Tank Mount							
Quadruplex	VOL75Q-1000V	7.5 x 4	5.5 x 4	12500	750	1000	79
	VOL100Q-1000V	10 x 4	7.5 x 4	15000	900	1000	80
	VOL250Q-1000V	25 x 4	18.5 x 4	31500	1890	1000	83

Note: 1. The unit is operated at an ambient temperature of 0-40 °C. Please contact our company for special environmental temperature requirements.
2. All flow calculations do not include spare equipment.

Oil-Free Rotary Vane Vacuum System



Oil-free rotary vane vacuum system is a cost-effective solution for applications where oil in the pump chamber or oil mist in the exhaust may be undesirable. Because there is no oil vapor in the oil-free vacuum pump, the medical vacuum system will not be contaminated by oil during use. It is an ideal vacuum pump for medical gas systems.

Simple design requires less routine maintenance than an oil-immersed pump, and does not cause many inconveniences and troubles for the lack of vacuum pump oil.

Features

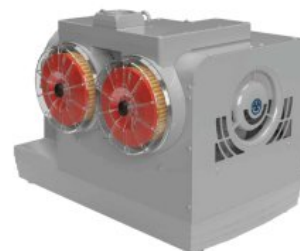
- Direct connection with motor, compact structure, light weight, smaller dimensions than other types of pumps
- Smaller vibration and smoother operation
- High-speed rotation of the multi-rotor is used to avoid pulse fluctuations in the suction and exhaust
- Oil-free vacuum pump can run continuously with open atmosphere

Model

System	Model	HP Each	KW Each(50Hz)	System Capacity		Receiver Tank Capacity (L)
				L/min	m ³ /h	
Horizontal Tank Mount						
Duplex	VOF17D-500H	1.7	1.25	666	40	500
	VOF30D-500H	3	2.2	1100	66	500
	VOF40D-500H	4	3.0	1633	98	500
Vertical Tank Mount						
Duplex	VOF30D-500V	3	2.2	1100	66	500
	VOF40D-500V	4	3.0	1633	98	500
	VOF55D-500V	5.5	4.0	2150	129	500
	VOF75D-500V	7.5	5.5	4066	244	500
	VOF100D-500V	10	7.5	6500	390	500
Vertical Tank Mount						
Triplex	VOF55T-500V	5.5	4.0	4300	258	500
	VOF75T-500V	7.5	5.5	8132	488	500
	VOF100T-1000V	10	7.5	13000	780	1000
	VOF150T-1000V	15	11	16500	990	1000
Vertical Tank Mount						
Quadruplex	VOF100Q-1000V	10	7.5	19500	1170	1000
	VOF150Q-1000V	15	11	24750	1485	1000

Note: 1. The unit is operated at an ambient temperature of 0-40 °C. Please contact our company for special environmental temperature requirements.
2. All flow calculations do not include spare equipment.

Claw Type Vacuum System



Claw vacuum pumps are 100% free of oil and contact during operation. This makes the pump particularly low-maintenance.

The two claw rotors of the vacuum pump rotate in opposite directions to each other in the cylinder. Claw technology ensures a high degree of efficiency and low energy consumption.

AmcareMed claw type vacuum pump comes standard with:

- Built-in clear cover inlet filters
- Vacuum relief valve
- Integrated suction filter

Features

- Compact design, simple structure, easy to operate and maintain, low operating cost
- Can work continuously for a long time under high pressure with low noise
- No contact between rotor and pump cavity, no friction, long service life

Model

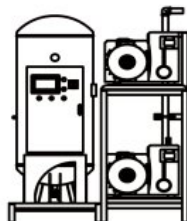
System	Model	HP Each	KW Each	System Capacity		Receiver Tank Capacity (L)
				L/min	m ³ /h	
Horizontal Tank Mount						
Duplex	VOC30D-500H	3	2.2	1666	100	500
	VOC40D-500H	4	3	2500	150	500
	VOC75D-500H	7.5	5.5	4583	275	500
Vertical Tank Mount						
Duplex	VOC30D-500V	3	2.2	1666	100	500
	VOC50D-500V	4	3	2500	150	500
	VOC75D-500V	7.5	5.5	4583	275	500
Vertical Tank Mount						
Triplex	VOC40T-500V	4	3	5000	300	500
	VOC75T-500V	7.5	5.5	9166	550	500
Vertical Tank Mount						
Quadruplex	VOC75Q-1000V	7.5	5.5	13749	825	1000

Note: 1. The unit is operated at an ambient temperature of 0-40 °C. Please contact our company for special environmental temperature requirements.
2. All flow calculations do not include spare equipment.

Configuration Guide

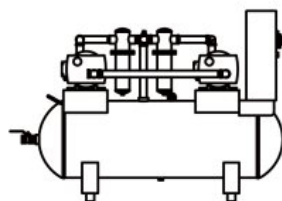
Vertical Tank Mount System ▶

The storage tank is installed in parallel with the control cabinet. The vacuum pump and electric motor are installed on one side (double pump) or both sides (≥3 pumps) of the tank. Space-saving and easy to operate.



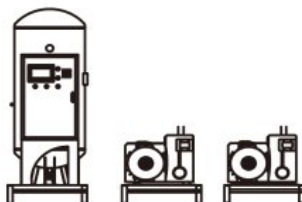
Horizontal Tank Mount System ▶

The storage tank is installed vertically with the control cabinet, and the vacuum pump is installed above the tank. Integrated packaging, easy to transport and installation.



SKID MOUNT System ▶

Each system is mounted on the skid, and the device configuration and orientation can be customized to fit the installation space on site. This configuration is usually applied to larger vacuum pumps.



Medical Vacuum Filter



Medical vacuum sterilizing filter is mainly used in the medical vacuum system. It can effectively catch and collect bacteria to avoid bacterial contamination.

The medical vacuum filter housing is made of aluminum alloy, the inner surface layer is electrophoretic, and the corrosion resistance is strong. External surface powder spraying treatment, coating quality, corrosion resistance, mechanical properties.

Model

Filter Model	Conn. Size(inch)	Vacuum Flow Hg@m/h	Air Flow m ³ /h	Dimensions(mm)				Diagram
				A	B	C	D	
F0020MV	1/2"	12.9	4.3	95	207	174	160	
F0045MV	1/2"	29.4	9.8	95	207	174	160	
F0070MV	3/4"	45	15	95	267	235	160	
F0100MV	3/4"	63	21	95	267	235	160	
F0125MV	1"	78	26	125	301	261	160	
F0180MV	1"	114	38	125	301	261	160	
F0265MV	1-1/2"	168	56	125	385	345	160	
F0370MV	1-1/2"	237	79	125	385	345	160	
F0515MV	2"	330	110	170	504	455	160	
F0745MV	2"	474	158	170	684	634	160	
F1060MV	2-1/2"	675	225	200	820	752	160	
F1280MV	3"	816	272	200	820	752	160	
F1650MV	3"	1050	350	200	981	915	160	

Pressure Correction Factors

Working Pressure	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.05	0.02
Correction Factors	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.05	0.02

Note: 1. The above data are measured at 1 bar, 21 C .
 2. Example: You could choose the F0745MV when processing air rate is 80m³/h working pressure 0.6 bar.

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