

JorVet

GasVak Active Scavenging System

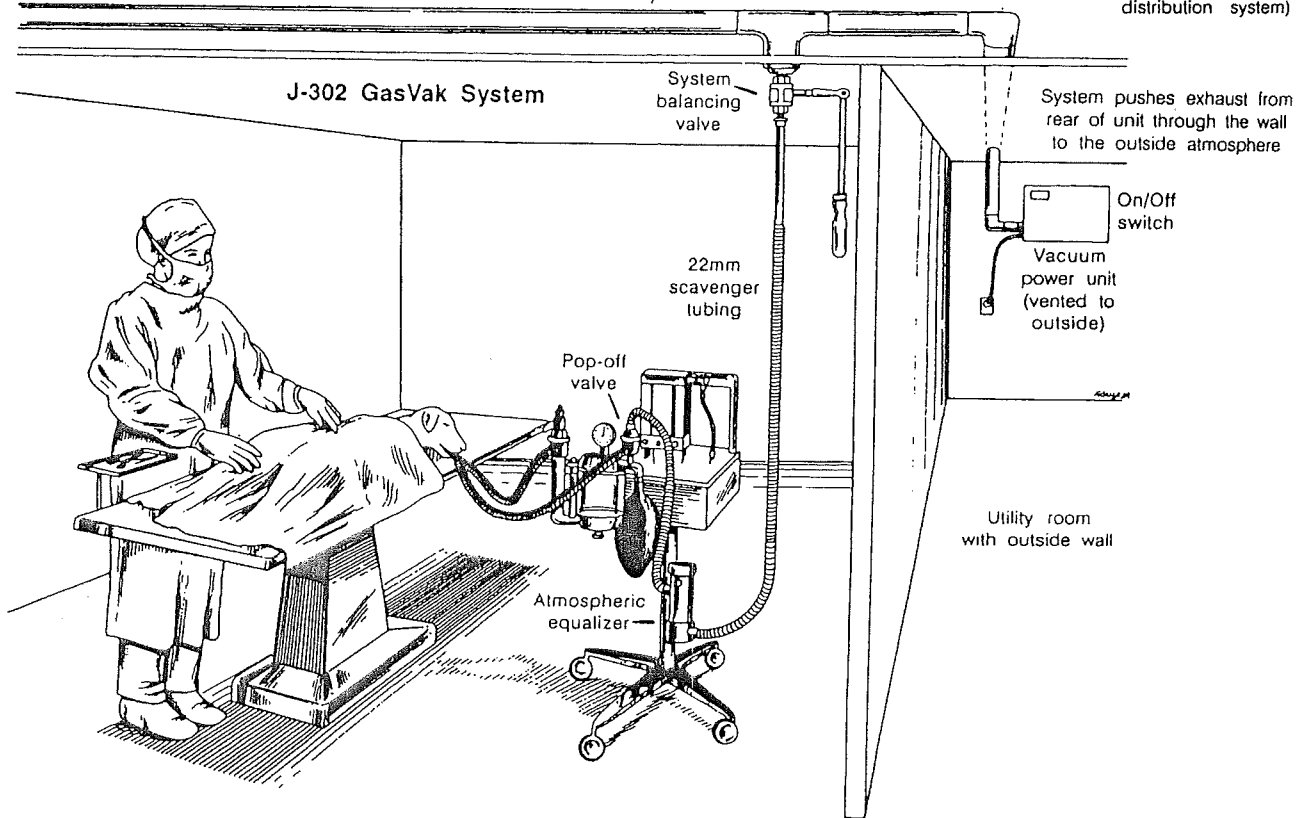
MODEL J-302

There is an increasing awareness by veterinarians and their staff of the health hazards of breathing waste anesthetic gases.

The JorVet GasVak Scavenger system is an active unit that removes waste anesthetic gases at the pop-off valve on all anesthetic machines or from the end of a non-rebreathing system. The waste gas is then vented to the outside of the clinic via a vacuum fan power unit.

1 1/2" PVC INPUT DISTRIBUTION NETWORK SCHEDULE 40, 120 OR 200

(Customer supplies this distribution system)



FEATURES OF THE JORVET GASVAK SYSTEM

Provides complete patient isolation
Does not increase gas consumption
Balanced vacuum at each station
Meets OSHA's requirements

No interference or restriction to patient breathing
Does not change normal flow rates
Meets UL requirements
Accepted by the F.D.A.

OPTIONS AVAILABLE FOR GASVAK J-302

J-302d1 Atmospheric Equalizer
J-302d2 Balancing valve
J-302d3 Remote on/off switch
J-248t Scavenger tubing



Jorgensen Laboratories, Inc.

1450 N. Van Buren Avenue
Loveland, Colorado 80538

**SHIPPING DOCUMENT
FOR
GAS-VAK J-302**

REQUIRED	ITEM	SHIPPED
1	Motor Housing	
2	Atmospheric Equalizers	
2	Balancing Valves 12"	
1	Exhaust Kit 2"	
1	Flow Meter	
1	Control Handle 18"	
1	Hardware Kit: (Consists of):	
	4 Mounting Screws 6 x 3/4"	
	4 Anchors (Blue)	
	2 Set Screws (Self-tapping)	
	2 Chrome Flanges (3/4")	
	2 Clamps (for Atmospheric Equalizers)	
	2 Adapters (22mm x 19mm)	
2	Balancing Valve Extenders 36" x 22mm	
6'	Tubing (19mm) Blue - AE to pop off valve	
15'	Tubing (22mm) White - AE to Balancing Valve	
1	Set of Instructions	
1	Warranty Card	

Packed By: _____ Date Packed: _____ Serial Number: _____

PLEASE RETURN WARRANTY CARD FOR VALIDATION

Have any questions please contact:

**GAS-VAK
54514 ROSA ROAD
BANDON, OR 97411
541-347-5414**

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(541) 347-5414

IMPORTANT NOTICE

To Whom It May Concern:

RE: J-302 exhaust direction

If it is necessary to change the direction of the exhaust of the J-302 motor housing, that normally exits straight out the back, follow these simple directions.

Mount the motor housing away from the wall exposing the exhaust adapter so a two inch 90 degree fitting can be installed. This fitting then may be moved in any direction.

The unit may be mounted on shelf brackets to allow access to the rear of the unit. The unit may be screwed to the bracket using sheet metal screws. Care should be taken to avoid drilling or screwing into the wiring harness.

Your Gas-Vak scavenger system is a closed system, therefore, the power unit may be mounted in any direction other than up-right.

If you have any questions give us a call at the above number.

Thanks

John D. Kight
Chief Engineer

**INSTALLATION AND OPERATING
INSTRUCTIONS
FOR
GAS-VAK® MODEL J-302**

Before installation is started it is advisable to check all local building and electrical codes. Your **GAS-VAK®** system operates from standard household electrical power. This current can still cause serious damage and injury if not installed properly. Whenever servicing your **GAS-VAK®** equipment, be sure electrical power is turned **OFF**.

MOTOR HOUSING

In **GAS-VAK®** Model J-302 we provide one attractive housing for the motor and fan. The unit is protected by a one-amp fuse (little fuse 3AG) located on the control panel, along with an on/off switch. A pilot lamp is also located on the control panel to indicate system operation.

The motor housing is designed to be mounted on the inside of an outside wall with the exhaust passed directly through the wall to the outside from the rear of the unit. If the power unit cannot be mounted on an outside wall the exhaust may be extended up to 100 feet in any direction to reach the outside. Several drawings are provided to assist you in mounting the unit, with specific instructions on drilling an exhaust hole through your wall. This housing is provided with a six-foot electrical cable for easy connection to a convenient outlet. A switchable outlet may be installed to service the power unit. The switch with a pilot lamp can be located in a convenient area for remote on/off operation. **GAS-VAK®** provides equipment for remote operation of your power unit. For further information please contact our customer service dept.

For installing motor housing on a wall. First, remove the six screws from the front panel. Now let the front panel hang by the cable harness while you secure the cabinet to the wall with the screws and anchors provided. Next, align the holes in the front panel with the holes in the cabinet and install all the screws. **CAUTION; DO NOT PICK UP UNIT BY FRONT PANEL WHILE REMOVED FROM CABINET.**

Care should be exercised when selecting a location for the **GAS-VAK®** motor housing. Our equipment is quite capable of operating in moderate temperature, but an unventilated area in the summertime can reach temperature that is excessive and unacceptable. **EXTREME CAUTION** should be considered before any decision is made to mount the unit in the attic.

EXHAUST

GAS-VAK® provides a two-inch PVC exhaust kit with each system consisting of one 90-degree ell with a screen installed. For installation of the exhaust plumbing, refer to drawing "B". First, **PRESS FIT ONLY (DO NOT CEMENT)** a 2-inch PVC coupling onto the exhaust flange at the rear of the motor housing. Next, measure, cut and **CEMENT** a short length of PVC pipe into this coupling, the outside end should extend one inch beyond the outside surface of the building. Last, **CEMET** the 90-degree fitting onto the pipe and caulk around the pipe with a material for exterior use and one that will receive paint.

Wherever you decide to vent your system, care should be taken not to vent the gas in an area where there are openings back into the building. In some states and counties, the building code requires the exhaust be extended above the roofline. Please check with your building department if you are not sure of the regulation.

INPUT PLUMBING AND EXHAUST PLUMBING

All input plumbing is standard 1 ½ inch PVC schedule 120 or 40. However, any schedule pipe may be used. The exhaust plumbing is standard 2 inch PVC pipe. **GAS-VAK®** does not supply this material, as it is readily available at your local hardware store. However, we do provide a list of material that will help you install your **GAS-VAK®** system. This list of material is sufficient for most installation of our basic system, but additional material will be required for more sophisticated installations. When installing the 1 ½" PVC input plumbing, be advised that this input pipe may be installed in any direction, and runs of up to 300 feet are possible. It is imperative that you **DO NOT** cement this input pipe to the motor housing. Again, (**DO NOT CEMENT**). If for some reason the motor should ever need service it would be next to impossible to remove it from the wall if you cemented the input and exhaust connections. Also, special instructions are included for the installation of fitting that will secure the balancing valve, as one or both ends may not require cementing. A setscrew is provided for securing and fitting to the pipe after proper alignment of the balancing valve is made. For installations where the building codes require copper pipe, it is recommended that 1 ¼" type "M" pipe be used. It is not necessary to solder each joint together as there is no pressure or vacuum present in the system. Just apply a liberal amount of GE sealant to the joint then press the pipe into the fitting, then install a self-tapping setscrew.

BALANCING VALVE

Our exclusive balancing valves provided with our systems have only one adjustment, see drawing (D). The system air-balancing valve controls the amount of airflow to the base of the Atmospheric Equalizer. These valves should be adjusted to provide 20 LPM as reference in the Atmospheric Equalizer section. The balancing procedure is quite simple but very important. **GAS-VAK®** provides a flow meter for this purpose and complete instructions on how to proceed. It is important to have all the balancing valves balanced to insure proper suction at the base of the atmospheric equalizer, when your anesthetic machine is moved and connected to different input balancing valves. If your anesthetic machine is attached to one air valve, you DO NOT close the remaining air valves, they just continue to such air.

BALANCING VALVE INSTALLATION

GAS-VAK®'s input balancing valve should be mounted as close to the anesthetic machine as possible. A good location is adjacent to your oxygen and gas lines coming out of the ceiling. For proper installation, extend the 3/4" standard pipe nipple one inch below the finished ceiling surface. Place the chrome flange over the nipple, and then screw on the balancing valve. **NOTE OF CAUTION..DO NOT** force it onto the nipple; hand tight will do, as there is no pressure in this system. Now install the three foot section of 22mm tubing with the connector on one end onto the balance valve, care should be exercised to trim this tube so the connector is within easy reach of the attendants for connecting the anesthetic machine to the scavenger equipment. If this tubing is dented, bent or kinked it may be straightened by dipping it into hot water, then held straight under cold water until cooled.

BALANCING PROCEDURES

Each installation is different and the amount of airflow is dependent upon the length of input pipe and the number of 90 degree bends in the system. This is why it is important to balance the entire system. This is a one-time procedure and should be done after installation is complete or when one of the balancing valves was moved. When balancing the system using our flow meter you have latitude of plus or minus 5 LPM. Just connect the flow meter to the end of the balancing valve tubing extender, starting with the one nearest the power unit then adjust the air control valve to bring the colored ball level with mid-scale or 20 LPM. Repeat this procedure on each balancing valve down the line.

However, after using your scavenger system for some time you may wish to readjust your air control balancing valves up or down as required to fit your individual requirements. Once the system is balanced, the control handle along with the flow meter may be stored.

GAS-VAK® ATMOSPHERIC EQUALIZER

Your **GAS-VAK®** Atmospheric Equalizer is designed to be mounted on your anesthetic machine, at any location as long as it is in the up right position, see drawing (C). One stainless steel clamp is provided for this purpose. For anesthetic machines with a standard 19mm pop off valve proceed as follows. Using the three-foot length of 19mm hose provided, connect the gas input on the **GAS-VAK®** Atmospheric Equalizer (the top port) to your pop-off valve of the anesthetic machine or the scavenger output on the non-rebreathing circuit. Next connect the discharge on the Atmospheric Equalizer (the bottom port) to the **GAS-VAK®** Balancing Valve, a seven-foot length of 22mm tubing is provided for this purpose. For anesthetic machines with the old pop-off valves, it may be necessary to contact the individual who regularly works on your anesthetic machines to provide assistance or contact Bickford Veterinary Anesthesia Equipment at (716)-652-1590. Also contact MedTec at (800) 348-1997 for new pop-off valves for older machines. You may wish to contact GAS-VAK for further technical assistance.

The patient vacuum control, located at the top of the **GAS-VAK®** Atmospheric Equalizer, controls the amount of vacuum present in the system. This Atmospheric Equalizer isolates the patient from the vacuum equipment. This equipment is calibrated at the factory to provide adequate scavenging without emptying the breathing bag, with an airflow rate of approximately 20 LPM at .25 Hg. measured at the input to the control balancing valve. This column of air passing over the waste gas input port creates a siphoning action to the pop-off valve. This is controlled by the amount of ambient air entering the top of the Atmospheric Equalizer. This ambient dry air purges the system and prevents the growth of algae and/or cultures in your evacuation system.

When utilizing the equipment for the first time after installation and balancing of the system, it is best to start with the patient vacuum control in the LO position. For 99 percent of all your medical procedures this control will be in this position. Even with the control in this position your Atmospheric Equalizer will provide less than 100 MLPM of air movement through the system. This small quantity of air movement is quite sufficient to insure proper evacuation of your waste gases. However, experience with the equipment will dictate the proper setting.