



# Operating Instructions

863 Valley View Road, Eighty Four PA 15330 USA  
Tel: 724-941-9701 Fax: 724-941-1369 e-mail: skctech@skcinc.com

## High Flow Vacuum Pump Cat. No. 228-505

The SKC High Flow Vacuum Pump (Gast Model 1532) is specifically designed for use with air sampling media and devices that require flows to 30 L/min. Pumps are supplied with a locking flow control valve, tubing, and a silencer.

### Performance Profile

<b>Flow Range:</b>	Up to 30 L/min, locking flow control valve flow range is 2 to 20 L/min
<b>Power:</b>	Line operation only, 110 to 115 V, 60/50 Hz
<b>Operating Ranges:</b>	<b>Temperature:</b> 32 to 104 F (0 to 40 C) <b>Relative Humidity:</b> 8 to 100% non-condensing
<b>Clearances:</b>	<b>Top:</b> .001 inch <b>Ends:</b> .0005 to .0010 inch
<b>Vane Life:</b>	6,000 to 27,000 hours, dependent upon application
<b>Weight:</b>	8 lbs (3.6 kg)
<b>Intrinsic Safety:</b>	Not UL Listed

### Mounting

- ❗ • **See Cautions and General Information on page 4.**
- **Disconnect electrical power at the circuit breaker or fuse box before installation.**
- **Ensure proper installation conditions and that installation clearances do not block airflow. Airflow blockage will overheat the pump.**

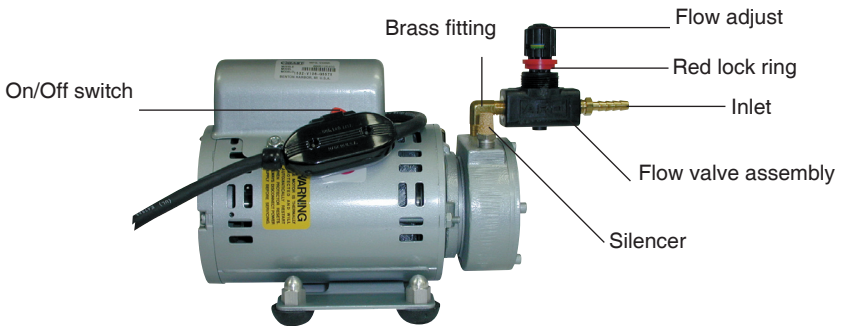
The SKC High Flow Vacuum Pump may be installed in any orientation. Reduce noise and vibration by mounting the pump to a stable, rigid surface and using shock mounts.

### Setup

- ❗ • **See Cautions and General Information on page 4.**

1. Remove plugs from pump inlet and outlet. Set aside for use during pump storage.
2. Install pipe and fittings that are the same size or larger than the pump's threaded ports.

3. Install relief valves and gauges at inlet or outlet, or both, to monitor performance. Check valves may be required to prevent back streaming through the pump.



## Calibration

- ❗ • **See Cautions and General Information on page 4.**
- **Let a cold pump warm to ambient temperature before starting it.**
- **Pump will start immediately when electricity is switched on.**
- **Protect all surrounding items from pump exhaust air, which can become very hot.**
- **Protect eyes and ears while operating the pump.**

1. Attach Tygon® tubing to inlet (barbed fitting)
2. Connect other end of tubing to the outlet of a representative sampling medium.
3. Using a second length of tubing, connect the inlet of the sampling medium to the outlet of a calibration device (e.g., rotameter calibrated to a primary standard).
4. Plug pump into an appropriate power source. Turn on the pump by using the rocker switch on the pump power cord. To lock the flow rate go to Step 5; otherwise, go to Step 6.
5. To lock the flow rate, unscrew the flow adjust (do not lose O-ring) from the flow valve, place both C rings (included with pump) just below the red ring on the valve, and screw flow adjust back onto the flow valve. Set flow rate according to Step 6. Push the red ring down slightly until it clicks. This prevents the flow rate from changing during sampling.
6. Consult the rotameter and turn the flow adjust counterclockwise to increase flow or clockwise to decrease flow until the desired flow is achieved.
7. Turn off the pump.

## Sampling

**!** *See Cautions and General Information on page 4.*

1. Replace representative sampling medium used for calibration with fresh unexposed media.
2. Turn on the pump.
3. Sample for the desired time.
4. When sampling is complete, turn off the pump. Remove the sampling medium, seal it, and send it with pertinent information to a laboratory for analysis.
5. Place representative sampling medium back in-line, turn on the pump, and verify flow.

## Shutdown

Follow proper shutdown procedures to prevent rust and corrosion.

**!** • *See Cautions and General Information on page 4.*  
• *Never add oil to this oil-less pump.*

1. Turn off pump. Vent all pressure/vacuum from the pump.
2. Disconnect the pump from the sampling train and remove pipes, fittings, valves, and gauges.
3. Turn on the electricity and operate the pump for > 5 minutes without plumbing.
4. Run pump at maximum vacuum for 10 to 15 minutes.
5. Again, operate pump for > 5 minutes without plumbing.
6. Turn off the pump, and unplug the power cord from the power supply.
7. Insert provided plugs into open ports to prevent dirt and contaminants from entering the pump. The pump is ready for further operation or for storage.

## Cautions and General Information

- *Pump only clean, dry air.*
- *Do not pump or evacuate any other gases, fluids, particles, solids, or substance mixed with air, particularly combustible substances that are likely to cause explosion. Do not operate pump in atmospheres that contain these substances/gases.*
- *Water vapor, oil-based contaminants, and other liquids should be filtered out.*
- *Corrosive gases and particulate material will damage the pump.*
- *Consult the manufacturer before using the pump at high altitudes or in reduced atmospheric pressure.*
- *Do not lubricate any part of this oil-less pump as damage and reduced service life can result.*
- *Install and use in protected environments only. Pump is not weather proof. Protect pump from dirt and moisture.*
- *To avoid the risk of electrocution, do not install or operate pump in areas where it can come into contact with water or other liquids.*
- *To prevent overheating, do not block the flow of cooling air over the pump. Pump ventilation grills should be kept clear of debris and obstruction. Do not place fingers, metal tools, or any other object through the grill holes.*
- *Disconnect electrical power at the circuit breaker or fuse box before installation and servicing. The motor in some models is thermally protected and will restart automatically when it cools if the thermal protection switch is tripped.*
- *Use of petroleum or hydrocarbon products will reduce vane service life.*
- *Electrically ground the pump.*
- *Protect all surrounding items from exhaust air, which can become very hot.*
- *Protect eyes and ears while operating the pump.*

**For additional cautions and pump maintenance information, see the manufacturer website at [www.gastmfg.com/literature.html](http://www.gastmfg.com/literature.html).**

*Notice: This operating instruction may not address all safety concerns (if any) associated with this product and its use. The user is responsible for determining and following the appropriate safety and health practices and regulatory limitations (if any) before using the product. The information contained in this document should not be construed as legal advice, opinion, or as a final authority on legal or regulatory procedures.*

*Form # 3792 Rev 0707*