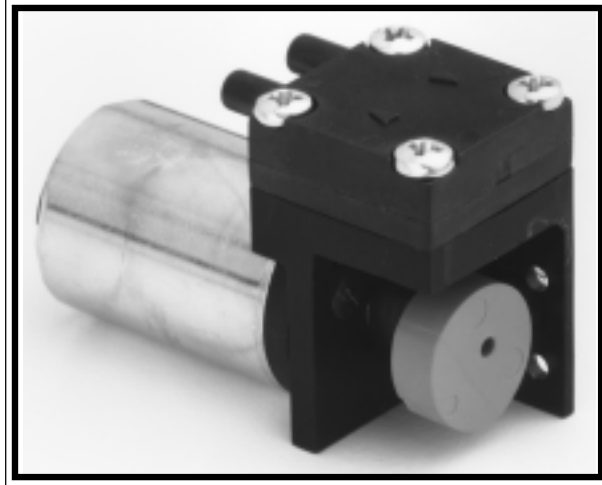




3D SERIES MINIATURE PUMP OPERATION & MAINTENANCE MANUAL



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www.gastmfg.com

This is the hazard alert symbol: ⚠. When you see this symbol, be aware that personal injury or property damage is possible. The hazard is explained in text following symbol.

Read this information carefully before proceeding.

The following is an explanation of three different types of hazards:

- ⚠ **DANGER** Severe personal injury or death will occur if hazard is ignored.
- ⚠ **WARNING** Severe personal injury or death can occur if hazard is ignored.
- ⚠ **CAUTION** Minor injury or property damage can occur if hazard is ignored.

GENERAL INFORMATION

⚠ **CAUTION** Required ambient temperature is -10°F to 150°F . Operation at temperatures outside this range will reduce pump life.

Lower atmospheric pressure at high altitudes lowers performance. Consult a Gast distributor for details.

Never lubricate this oil-less pump. Sealed bearings are grease-packed. Introducing petroleum-based or hydrocarbon products will reduce service life of diaphragm and valve.

INSTALLATION

⚠ **CAUTION** Do not block flow of cooling air over pump in any way.

Ensure that nothing will interfere with movement of eccentric. While not dangerous, eccentric must move freely to allow pump to operate properly.

Mounting

To reduce noise and vibration, use Velcro or a vibration-isolated mounting surface.

Plumbing

To prevent airflow restriction, use an elastic hose of same size as hose port. These ports are not designed to support plumbing.

Filters

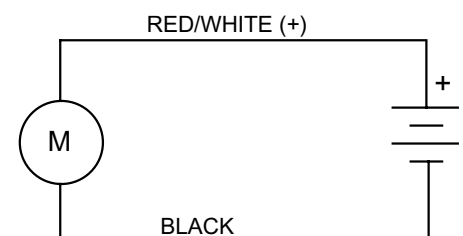
Avoid unfiltered operation in an environment where there is visible airborne particulate material. Use a suitable filter to avoid ingesting dirt/metal or other foreign material into pump.

Wiring

⚠ **WARNING** Poor wiring can result in electric shock. Wiring must conform to all required safety codes and be installed by a qualified person. Refer to wiring diagram below.

Ensure that supply voltage agrees with pump operating voltage. Remove power to pump if motor fails to start or stops under load. Warming pump to a minimum of -10°F in extremely cold weather will ease starting and extend pump life.

DC WIRING



KEEP THIS DOCUMENT FOR FUTURE REFERENCE

TROUBLESHOOTING GUIDE

OPERATION

⚠ CAUTION This unit is designed to pump gases only. Ingestion of dirt, metal, water, or petroleum-based contaminants will reduce pump life.

General recommendations for operation:

1. Avoid operating pump at temperatures less than -10°F or greater than 150°F .
2. Draw through pump only those substances, which do not react with EPDM or PPS (diagram material).
3. Avoid unfiltered operation in an environment where there is visible airborne particulate matter.

4. Avoid ingesting dirt into pump.

Following these basic recommendations will avoid damage to pump and may extend its operating life.

MAINTENANCE

Do not attempt to replace connecting rod or motor bearings. If after cleaning unit still does not operate properly, contact your representative, or factory, or return pump to an Authorized Service Facility.

TROUBLESHOOTING GUIDE			
SYMPTOM	POSSIBLE CAUSE	POINT TO CHECK	REMEDY
Won't Start	<ul style="list-style-type: none"> • Electrical Connection • Wrong/Low Voltage • Pressure/Vacuum on Head 	<ul style="list-style-type: none"> • Ensure electrical power is supplied and inspected • Inspect relief valve 	<ul style="list-style-type: none"> • Checkplug or wire connection • Apply proper voltage • Reset or replace reliefvalve
Excessive Noise	<ul style="list-style-type: none"> • Wrong Voltage • Hose or plumbing leak 	<ul style="list-style-type: none"> • Inspect power supply • Inspect hoses for cracks 	<ul style="list-style-type: none"> • Apply proper voltage • Replace hose
Overheating	<ul style="list-style-type: none"> • Dirty Filter • Low or High Voltage 	<ul style="list-style-type: none"> • Inspect filter • Inspect power supply 	<ul style="list-style-type: none"> • Replace filter • Apply proper voltage
Low Pressure Low Vacuum	<ul style="list-style-type: none"> • Dirty Filter • Low Voltage 	<ul style="list-style-type: none"> • Inspect filter • Inspect power supply 	<ul style="list-style-type: none"> • Replace filter • Supply proper electricalpower • Send unit to an authorized service facility

AUTHORIZED SERVICE FACILITIES

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