

Operations and Maintenance Instructions

GENERAL APPLICATION

IMS Series pumps are designed to handle coolants and other liquids containing rust preventatives. They should not be used to circulate liquids containing fine contaminants as in grinding applications because of the mechanical seal employed. Fluid reservoir should be baffled to prevent foreign matter from reaching the pump intake. (For applications requiring the circulation of liquids containing large amounts of foreign matter, Graymills IMV, TH, HR, HP Series Centrifugal Pumps are recommended).

MAXIMUM VISCOSITY

These pumps will handle viscosities up to 500 SSU. Since viscosity varies according to temperature, care should be taken during cold weather to assure that viscosity is within the maximum range. If pump is operated beyond the maximum viscosity range, the motor will be overloaded and will burn out unless overload protection has been installed. Overload protection is recommended.

INITIAL PRIMING

IMS Series pumps are self priming, but must be primed once before initial operation. Prime by filling the discharge port or piping so that fluid is introduced to the impeller.

PIPING AND FITTINGS

Suction (intake) piping threads must be sealed with pipe dope to prevent air infiltration. IMS Series pumps deliver a large volume of liquid at low pressure. The pump may be throttled to adjust desired flow without the need for a bypass or relief valve. The pump will use less horsepower as flow is reduced. Flow rate is influenced greatly by restrictions such as small piping and numerous fittings. It is advisable to use pipe or hose of the same size as the pump discharge. If reductions must be made, do so as close to the point of application as possible. Needle and globe valves greatly restrict flow. Gate valves with minimum restrictions are recommended. A street "EI" offers unusual resistance and should not be used.

TEMPERATURE LIMITATIONS

Pumps with plastic impellers can be used with temperatures up to 180°F. Temperatures higher than 180°F will not damage aluminum impellers but motor must be protected from overheating.

ELECTRICAL CONNECTIONS

Pump motor must be grounded. Check to be certain that the electrical supply to be used corresponds to that listed on the motor nameplate. For 3-phase motors, check the direction of rotation to make sure it is wired to run in a clockwise direction looking down on the motor. Motors are sealed and do not require lubrication. Do not restrict vents on fan-cooled motors, and keep oil and chips from accumulating around the motor. **These motors are not recommended for hazardous locations or liquids. Graymills can provide explosion proof motors for such purposes.**

WHAT TO CHECK IF FLOW IS REDUCED BELOW RATED OUTPUT

- a. Is liquid level above intake point?
- b. Is anything blocking entrance of liquid into the pump? Make sure pump intake is not on bottom of container.
- c. Are there any unusual restrictions in the piping, such as crimped hose, excess fittings, small tubing, etc.?
- d. Is the liquid viscosity too heavy, or did temperature decrease make it so?
- e. Check for binding within the body of the pump caused by rags, strings, or chips.
- f. Is the pump running in the right direction? (3-phase only)
- g. Is the motor running on the correct voltage cycle and phase?
(Low voltage will cause a reduction in RPMs)

- h. Is suction piping airtight?
- i. Have abrasives damaged pump seal? (Signaled by gradual lengthening of time for the pump to prime. Pump draws air; flow is reduced. Eventually fluid drains from intake line and pump loses prime.)

REPLACEMENT PARTS:	<u>Model No.</u>	<u>Impeller No.</u>	<u>Seal No.</u>	<u>Oil Window</u>
	IMS08-E, IMS08-F	785-07399	785-07441	785-07407
	IMS25-E, IMS25-F	785-07402	785-07406	785-07407
	IMS50-F	785-07403	785-07408	-
	IMS75-F	785-07404	785-07408	-
	IMS100-F	785-07405	785-07408	-

HOW TO ORDER PARTS

Give model number of pump. If model number cannot be determined, the motor serial number, horsepower, speed and type will help. Approximate date of purchase will also help.

Give serial or lot number of pump.

WARRANTY

Graymills Corporation warrants that the equipment manufactured and delivered, when properly installed and maintained, shall be free from defects in workmanship and will function as quoted in the published specification. **Graymills** does not warrant process performance, nor assume any liability for equipment selection, adaptation, or installation.

Warranty does not apply to damages or defects caused by shipping, operator carelessness, misuse, improper application or installation, abnormal use, use of add-on-parts or equipment which damages or impairs the proper function of the unit, and modifications made to the unit. Warranty does not apply to expendable parts needing replacement periodically due to normal wear and tear.

A new Warranty period shall not be established for repaired or replaced materials or products. Such items shall remain under Warranty for only the remainder of the Warranty period of the original material or product.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY. **GRAYMILLS CORPORATION** MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESTATED OBLIGATION ARE HEREBY DISCLAIMED BY **GRAYMILLS CORPORATION** AND EXCLUDED FROM THIS SALE. **Graymills** warranty obligations and Buyer remedies (except to title), are solely and exclusively stated herein. In no case will **Graymills** be liable for consequential damages, loss of production, or any other loss incurred due to interruption of service.

Graymills' obligation under this Warranty shall be limited to:

- (a) Repairing or replacing (at **Graymills** sole discretion) any non-conforming or defective component within one year from the date of shipment from **Graymills**.
- (b) Repairing or replacing (at **Graymills** sole discretion), components supplied by, but not manufactured by **Graymills**, to the extent of the warranty given by the original manufacturer.

Buyer must give **Graymills** prompt notice of any defect or failure.

If you believe you have a Warranty claim, contact **Graymills** at (773) 248-6825. Any return material must have an RMA number on the outside of the package and shipping prepaid or shipment will be refused. **Graymills** will promptly examine the material and determine if it is defective and within the Warranty period.