

## Operations and Maintenance Instructions

### GENERAL APPLICATION

IMV Series pumps are designed for use with coolants and other fluids containing rust preventatives. (Do not use for water circulation).

### 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.

### ABRASIVE RESISTANCE

IMV Series will handle a relatively large amount of foreign material without damage to the pump because there are no seals or bearings in the liquid. Sediment, however, should not be allowed to accumulate around the lower portion of the pump. Such an accumulation can clog the impeller housing creating binding which can damage the impeller and the motor. Where substantial quantities of foreign material will be present, make sure the pump is mounted well off the bottom and baffled to prevent accumulation around the impeller.

### FLUID LEVELS

IMV Series Pumps have an intake above the impeller that must be covered to assure satisfactory pumping. Maximum liquid level is 1" below the motor. Minimum level is 1" above inlet.

### PIPING AND FITTINGS

These 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 90° elbow 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. We recommended the use of a fuse in the circuit with up to 10% greater amperage than indicated on the motor nameplate. This will protect the motor in the event of an overload. 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?
- 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?  
(Lower voltages will cause a reduction in RPMs)

#### TO INSPECT OR CHANGE IMPELLER

- a. Remove screws and volute coverplate.
- b. Remove screw and washer securing impeller to shaft and pull impeller off.

REPLACEMENT PARTS:	<u>Model No.</u>	<u>Impeller No.</u>	<u>Oil Window</u>
	IMV08-E, IMV08-F	785-07399	785-07407
	IMV25-E, IMV25-F	785-07402	785-07407
	IMV50-F, IMV50-E	785-07403	-
	IMV75-F	785-07404	-
	IMV100-F	785-07405	-

#### 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.