

INSTALLATION AND OPERATING INSTRUCTIONS

RAJAMANE MAKE RKM SERIES COOLANT PUMPS

(FOR DETAILED OPERATION AND MAINTENANCE MANUAL, WRITE TO US WITH MODEL/SERIES AND MACHINE NUMBER FOR WHICH YOU NEED IT)

1. RECEIVING AND STORING:-



1.1. STORE THE PUMP IN A CLEAN AND DRY PLACE IF IT IS NOT TO BE INSTALLED IMMEDIATELY.

1.2. KEEP THE PUMP HORIZONTALLY ONLY AND SEE THAT NO SOLID PARTICLES OR WASTE ENTER INTO THE PUMP SUCTION OR DELIVERY SIDE.

2. APPLICATIONS:-

2.1 RAJAMANE MAKE RKM COOLANT PUMPS ARE MULTISTAGE CENTRIFUGAL PUMPS DESIGNED FOR PUMPING LIQUIDS FOR MACHINE TOOLS, LIQUID TRANSFER IN INDUSTRIAL WASHING MACHINES AND MANY SIMILAR APPLICATIONS.

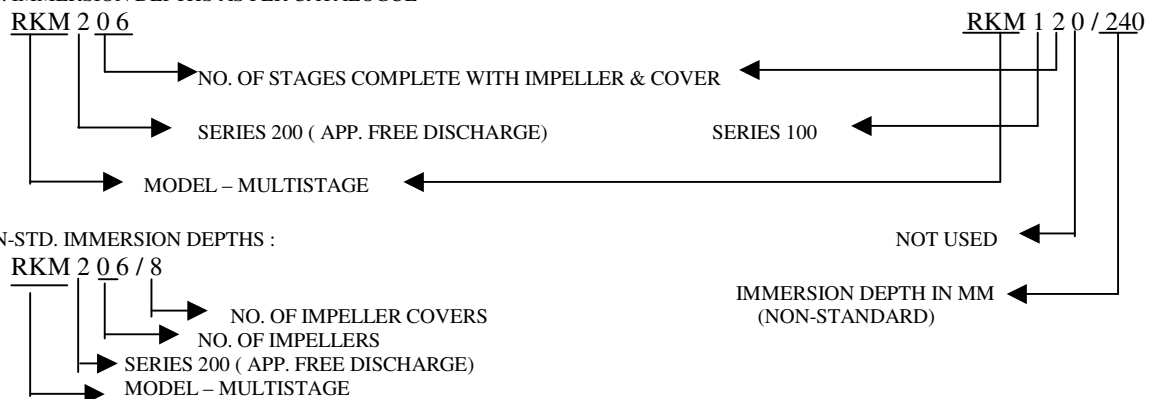
THE PUMP MUST NOT BE USED FOR TRANSFER OF INFLAMMABLE LIQUIDS SUCH AS DIESEL OIL, PETROL, ETC., UNLESS IT IS SPECIFICALLY DESIGNED AND SUPPLIED FOR THE SAME. SPECIAL VERSIONS OF COOLANT PUMPS ARE AVAILABLE FOR SUCH APPLICATIONS.

THE LIQUID TO BE PUMPED MUST NOT CONTAIN ABRASIVE PARTICLES OR FIBRES. WHEN PUMPING LIQUIDS WITH HIGHER DENSITY OR VISCOSITY OTHER THAN THAT OF WATER, THE MOTOR CAPACITY (SIZE) SHOULD BE TAKEN INTO CONSIDERATION.

3. TYPE DESIGNATION:-

THE STANDARD RANGE OF PUMPS ARE AVAILABLE WITH IMPELLER IN COVER COMBINATIONS. ON REQUEST, OTHER IMMERSION DEPTHS, AGAINST DUTY COMBINATIONS CAN BE SUPPLIED. THE GENERAL NOMENCLATURE OF RKM- SERIES COOLANT PUMPS IS AS UNDER:

FOR STD. IMMERSION DEPTHS AS PER CATALOGUE



4. INSTALLATION:-



THE COOLANT PUMP IS DESIGNED FOR TANK MOUNTING IN VERTICAL POSITION. THE PUMP IS POSITIONED IN A HOLE CUT INTO THE COVER OF THE TANK (UPPER SIDE) AND IS SECURED TO THE TANK BY 4 SCREWS THROUGH THE HOLES IN THE MOUNTING FLANGE. IT IS COMMENDED TO FIT A SEALING GASKET BETWEEN THE PUMP FLANGE AND TANK. IN CASE OF FITTING ON SMALL HEIGHT TANK, FOLLOWING CARE SHOULD BE TAKEN:-

- A) THE DRAIN HOLE IS NOT BLOCKED.
- B) THE MINIMUM LEVEL OF LIQUID IS MAINTAINED WHILE STARTING THE PUMP.
(FOR DEEPER TANKS, MINIMUM AND MAXIMUM LEVELS AS SHOWN IN THE CATALOGUE ARE TO BE MAINTAINED)
- C) MAINTAIN A GAP OF MIN 25mm FROM THE TANK BOTTOM TO PUMP SUCTION END FOR 150LPM DISCHARGE CAPACITY COOLANT PUMPS.

5. A. ELECTRICAL CONNECTION:-



WARNING:- DO NOT CONNECT THE PUMP DIRECTLY TO THE SUPPLY LINES, CONNECT THROUGH PROPER SWITCH & PROVIDE SUITABLE PROTECTION.

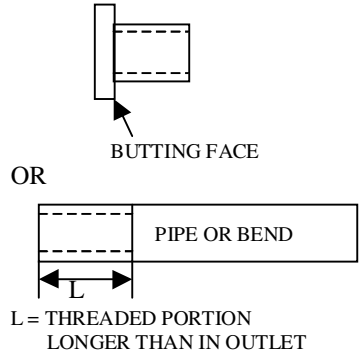
CHECK THE VOLTAGE AND FREQUENCY MARKED ON THE PUMP NAME PLATE, MAKE SURE THAT THE MOTOR IS SUITABLE FOR THE ELECTRICITY SUPPLY ON WHICH IT WILL BE USED. THREE PHASE MOTORS MUST BE CONNECTED TO A MOTOR STARTER WITH SUITABLE OVERLOAD RELAY AND SINGLE PHASE PREVENTOR.

DO NOT START THE PUMP WITHOUT PUMP PORTION IMMersed IN THE LIQUID.

THE MOTOR SHOULD BE CONNECTED TO THE SUPPLY AS SHOWN IN THE DIAGRAM INSIDE THE TERMINAL BOX COVER.

B. PIPE CONNECTION TO THE OUTLET :-

- A) FOR OUTLET CONNECTION USE A NIPPLE OR OTHER FITTING HAVING THE SHOWN DIMENSION & TYPE FOR PROPER CONNECTION. USE ONLY "IS" MARKED PIPE CONNECTORS OR ELSE THE OUTLET MAY GET DAMAGED.
- B) TRY TO FIT A BEND IMMEDIATELY AFTER OUTLET.
- C) USE GI PIPE FITTINGS RATHER THAN HYDRAULIC FITTINGS WITH SHARP BENDS & SMALL OPENINGS.
- D) USE THE MAXIMUM (OUTLET) DIA PIPE, AS FAR AS POSSIBLE TO REDUCE HYDRAULIC LOSSES.



6. STARTING THE PUMP:-

BEFORE STARTING THE PUMP MAKE SURE THAT THE DIRECTION OF ROTATION IS AS PER THE ARROW ON THE MOTOR/PUMP BODY (START THE PUMP FOR A SHORT PERIOD AND CHECK THE DIRECTION OF ROTATION) LOOKING FROM THE MOTOR FAN COVER END. PLEASE NOTE THAT THE PUMP DELIVERS IN REVERSE DIRECTION TOO. HENCE THIS HAS TO BE CHECKED PHYSICALLY & NOT BY FLOW.

- A) THE PUMP PORTION IS PARTLY FILLED WITH THE LIQUID. (PARTLY SUBMERGED)
- B) THE PIPE CONNECTIONS ARE TIGHT.
- C) THE TANK IS CLEAN.
- D) THERE IS A GAP BELOW THE SUCTION, AS SAID IN (4).



7. OPERATION AND MAINTENANCE:-

NOTE:- THE PUMP SHOULD NOT BE ALLOWED TO RUN AGAINST A CLOSED DISCHARGE VALUE FOR MORE THAN 2 MINUTES, AS THIS WILL CAUSE AN INCREASE IN TEMPERATURE AND FORMATION OF STEAM IN THE PUMP, WHICH MAY CAUSE SEVERE DAMAGE TO THE PUMP PARTS, SPECIALLY TO THE MECHANICAL SEAL.

7.1 LUBRICATION AND MAINTENANCE :-

PUMPS INSTALLED AS PER THESE INSTRUCTIONS NEED VERY LITTLE MAINTENANCE. ALSO THE DESIGN OF THE PUMP, ENSURES A TROUBLE FREE RUN FOR A LONG PERIOD.

THE MECHANICAL SEAL IS SELF ADJUSTMENT TYPE, AND HAS WEAR RESISTANT SEAL RINGS WHICH ARE LUBRICATED BY THE PUMPED LIQUID. ALSO THE PUMP BEARING (WHERE-EVER USED) ARE LUBRICATED SIMILARLY.

THE MOTOR BEARINGS ARE GREASE PACKED (ZZ) AND SEALED FOR LIFE. NO FURTHER LUBRICATION IS NECESSARY.

7.2 PERIODIC CHECKS:-

TO ENSURE SMOOTH OPERATION OF PUMP AND CORRECT FLOW OF LIQUID, FOLLOWING CHECKS SHOULD BE MADE:-

- A) CHECK THE QUANTITY OF LIQUID AND THE OPERATING PRESSURE.
- B) CHECK THAT THERE ARE NO LEAKAGE.
- C) CHECK THAT THE MOTOR IS NOT OVERHEATING.
- D) CHECK THE TRIPPING OF THE MOTOR STARTER AND FUNCTIONING OF OTHER CONTROLS.
- E) CLEAN THE CHIP TRAYS, FILTER, TANK ETC.

8. SERVICE:-

SPARE PARTS ARE AVAILABLE ALL OVER THE COUNTRY THROUGH OUR DEALERS NETWORK. PUMP CAN ALSO BE SENT TO US FOR SERVICING WITH PROPER REPORT AND DOCUMENTS, ON FREIGHT PAID BASIS, TO K.R.PURAM (BANGALORE) BRANCH, BY ANY REPUTED TRANSPORTER.

WHILE ORDERING SPARES, PLEASE MENTION THE TYPE/MODEL/FRAME & MACHINE NUMBER, AS ON THE NAME PLATE. ALSO MENTION THE SUFFIXES OR PREFIXES GIVEN WITH THE TYPE/MODEL/FRAME, ON THE NAMEPLATE.

<p>TEST CERTIFICATE: MACHINE NO.:</p> <p>ACTUAL TEST DETAILS</p> <p>Insulation resistance: 500 MΩ</p> <p>H.V.test at 2 KV: Passed</p> <p>No load current at 415 / V : A</p> <p>Motor accelerates to full speed at 1/3 rated voltage.</p> <p>Coolant discharge at m Head : LPM</p> <p>This coolant pump is tested & found to be electrically & mechanically sound and in working order in all particulars, as per IS:325 & IS:2161.</p>	<p>GUARANTEE CERTIFICATE:</p> <p>This coolant pump is guaranteed against manufacturing defects TWELVE calendar months from the date of commissioning or FIFTEEN calendar months from the date of dispatch whichever is earlier. This guarantee is subject to the condition that no tempering or repairing is done to the coolant pump. Failure due to single phasing, coolant entry are not covered by this guarantee. For repair/replacement the coolant pump must be sent to our works in Bangalore, through any reputed transport having delivery godown in K.R.Puram , Bangalore, FREIGHT PAID. In case of any complaints furnish full name plate details & the party from whom this coolant pump was purchased.</p> <p>DATE: SIGN:</p>
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