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■ **INSTALLATION, OPERATION  
AND MAINTENANCE MANUAL** ■

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**HM**

Series

**HORIZONTAL  
MULTISTAGE PUMPS**



Dear customer,

Congratulations on purchase of “EKKI HORIZONTAL MULTISTAGE PUMP”.

The objective of this manual is to provide you with the installation, operation and maintenance details of the HORIZONTAL MULTISTAGE PUMP.

The manual should be read before installing the pumpset.

## PRIOR INSPECTION

Kindly check the Horizontal Multistage pump is delivered in a safe corrugated box, without any external damages. If any damages before starting the pumpset, please do inform for replacements.

## PRODUCT OVERVIEW

The highly corrosive resistant; stainless steel (which includes the impellers, diffuser, and the shaft) multistage pumpset delivers water at its best efficiency point of  $5\text{m}^3$ . The AC induction motor, TEFC type has built-in thermal overload protector with F class insulation for continuous duty.

### TECHNICAL DATA/OPERATIONAL LIMITS :

Power Supply : Single Phase 230V, 50Hz

Three Phase 415V, 50Hz

Speed : 2900 rpm

Max. Flow rate :  $5\text{m}^3/\text{hr}$

Max. Head : 62m

Liquid Temperature : Max.  $35^\circ\text{C}$

Class of Insulation : F

Thermal overload protection :  $145 \pm 5^\circ\text{C}$

## INSTALLATION

There are certain points that are to be taken into account while installing:

- The pumpset should be installed in dry, well-ventilated place.
- The pumpset should be installed on rubber base on a flat surface to avoid vibration.
- Correct pipe sizes should be installed as per the requirement.
- Pre-filling of the pump with water is mandatory, if not it will damage the mechanical seal and impeller. (only for the first time during installation).



**Exploded View of HM Series Pumpset**

Part No	Part Name	Qty	Material	Part No	Part Name	Qty	Material
1	SUCTION CHAMBER	1	CAST IRON	16	FLAT ROTOR SHAFT	1	SS 410
2	M6 ALLEN STUD	4	SS 410	17	CIRCLIP	1	SS 304
3	M6 NUT	2	SS 304	18	FRONT BEARING 6203/Z2	1	SS
4	IMPELLER	1/STAGE	SS 304	19	BACK BEARING 6202/Z1	1	SS
5	DIFFUSER	1/STAGE	SS 304	20	MOTOR BODY	1	ALUMINIUM
6	BUSH	1/STAGE	SS 410	21	CAPACITOR	1	-
7	DELIVERY CHAMBER	1	CAST IRON	22	TERMINAL BOARD	1	BAKELITE
8	DRAIN PLUG	2	SS 410	23	TERMINAL BOX COVER	1	ABS
9	DRAIN PLUG 'O' RING	2	NITRILE RUBBER	24	TERMINAL BOX COVER SCREW	4	SS 410
10	FLAT RING	1/STAGE	NITRILE RUBBER	25	END COVER	1	CAST IRON
11	SEAL LOCKING COLLAR	1	SS 410	26	COOLING FAN	1	NYLON
12	MECHANICAL SEAL ASSEMBLY	1	-	27	COTTER PIN	1	MS
13	WATER CUTTING RING	1	NITRILE RUBBER	28	COOLING FAN COVER	1	MS POWDER COATING
14	BUSH	1	SS 410	29	COVER SCREW M5 x 6	4	SS 304
15	IMPELLER LOCK NUT	1	SS 410				

## MAINTENANCE

No regular maintenance is required for the pumpset. If any maintenance, it should be carried out by the skilled technicians only.



**Disconnect the power supply before carrying out any maintenance work.**

## TROUBLE SHOOTING

S.No	PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
1	Pumpset delivers insufficient water	<ul style="list-style-type: none"><li>• Foreign particles clogged in impellers/pipes</li><li>• Improper pipe size</li><li>• Pumpset jammed with sediments</li></ul>	<ul style="list-style-type: none"><li>• Clean the impellers/pipes</li><li>• Pipe size to be checked as per requirement</li><li>• Clean entire pumpset, install strainer</li></ul>
2	Pumpset runs with noise and excess vibration	<ul style="list-style-type: none"><li>• Bearings worn out</li></ul>	<ul style="list-style-type: none"><li>• Replace motor bearings</li></ul>
3	Water leakage in pumpset	<ul style="list-style-type: none"><li>• Mechanical seal damaged</li></ul>	<ul style="list-style-type: none"><li>• Replace Mechanical seal</li></ul>

**EKKI GROUP**

**EKKI PUMPS | DECCAN PUMPS PRIVATE LIMITED**

The Kanapathy Towers,  
1391-A1, Sathy Road, Ganapathy,  
Coimbatore - 641006,  
Tamil Nadu, INDIA.

☎ +91 422 - 2531141, 2533696

✉ info@ekkgroup.com