# MH, MHI & MHN SERIES

Horizontal Multistage End-suction Pumps 50 Hz





## MH, MHI, MHN

### HORIZONTAL MULTISTAGE **END-SUCTION PUMPS**



#### INTRODUCTION

The Lubi MH, MHI and MHN pumps are non-self priming, horizontal, multistage, centrifugal pumps.

Motor and pump are close coupled in a convenient and compact design for quick installation in limited space. The pump is fitted with a maintenance-free, mechanical shaft seal. The pumps have axial suction port and radial discharge port and are mounted on a base plate.

These pumps are available in three basic versions:

- ☐ MH: Pump stages as well as all moving parts in contact with the pumped liquid are made of stainless steel AISI 304. Discharge casing and suction casing are Grey Iron. Base plate is made of steel. All Grey Iron parts and base plate are CED coated for rust & corrosion prevention.
- ☐ MHI: Discharge casing, suction casing as well as all parts in contact with the pumped liquid are made of stainless steel AISI 304.
- ☐ MHN: Discharge casing, suction casing as well as all parts in contact with the pumped liquid are made of stainless steel AISI 316.

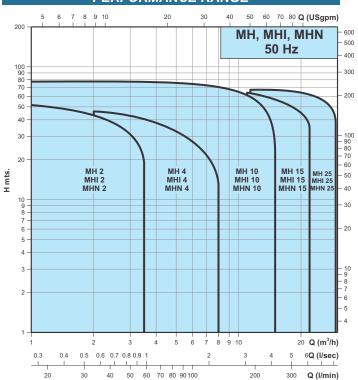
#### **APPLICATIONS**

The MH, MHI and MHN pumps are designed for small domestic and industrial water supply systems.

#### **Applications include**

- ☐ Liquid transfer and circulation of liquids within light industry and farming
- Pressure boosting in single-pump and multi-pump booster systems
- Domestic water supply
- Cooling systems
- ☐ Air-conditioning systems
- Washing and cleaning systems
- Water treatment.

## PERFORMANCE RANGE



#### FEATURES AND BENEFITS

- □ Compact design
- Reliable and robust construction
- □ Energy-optimised pumps
- Easy and simple installation
- □ User-friendly operation
- □ Low noise level
- Reliable water supply.

#### **OPERATING CONDITIONS**

Flow range : 0.5 - 28 m<sup>3</sup>/h Head range : Up to 77 metres : Max. +55°C Ambient temperature Liquid temperature range: 0°C to +90°C

The maximum operating pressure depends on the temperature of the pumped liquid, see the table below:

|                       | Maximum operating pressure       |                 |  |
|-----------------------|----------------------------------|-----------------|--|
| Pump type             | 1 Mpa (10 bar)                   | 0.6 Mpa (6 bar) |  |
|                       | Temperature of the pumped liquid |                 |  |
| MH 2, MHI 2, MHN 2    | 0°C to +40°C                     | +41°C to +90°C  |  |
| MH 4, MHI 4, MHN 4    | 0°C to +40°C                     | +41°C to +90°C  |  |
| MH 10, MHI 10, MHN 10 | 0°C to +40°C                     | +41°C to +90°C  |  |
| MH 15, MHI 15, MHN 15 | 0°C to +40°C                     | +41°C to +90°C  |  |
| MH 25, MHI 25, MHN 25 | 0°C to +40°C                     | +41°C to +90°C  |  |

Min. inlet pressure: According to the NPSH curve + a safety

margin of 1.0 metres.

Max. inlet pressure: Limited by the maximum operating

pressure.

#### **PUMP**

The MH, MHI, MHN pumps are non-self priming, horizontal, multistage, centrifugal pumps fitted with a mechanical shaft seal. The pumps have axial suction port and radial discharge port and are mounted on a base plate.

For pipe connections, see the table below:

| Connections              | MHI 2, | MHI 4,  | MHI 10, |        | MH 25,<br>MHI 25,<br>MHN 25 |
|--------------------------|--------|---------|---------|--------|-----------------------------|
| Axial suction port       | Rp 1   | Rp 11/4 | Rp 1½   | Rp 2   | Rp 2                        |
| Radial discharge port    | Rp 1   | Rp 1    | Rp 1½   | Rp 2   | Rp 2                        |
| Drain hole, priming hole | Rp 3/8 | Rp 3/8  | Rp 3/8  | Rp 1/2 | Rp 1/2                      |

#### **MOTOR**

The pump is fitted with a totally enclosed, fan-cooled, squirrel-cage induction motor.

: 2900 rpm Rated speed Enclosure class : IP 54 Insulation class : F

Standard voltages : 0.37 - 1.1 kW: 1 x 220-240 V

0.37 - 3.7 kW: 3 x 220-240/380-415 V

: 50 Hz Supply frequency

Single-phase motors have built-in thermal overload protection.

Three-phase motors must be connected to a motor starter according to local regulations.

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# HORIZONTAL MULTISTAGE END-SUCTION PUMPS



### SECTIONAL DRAWING & MATERIALS

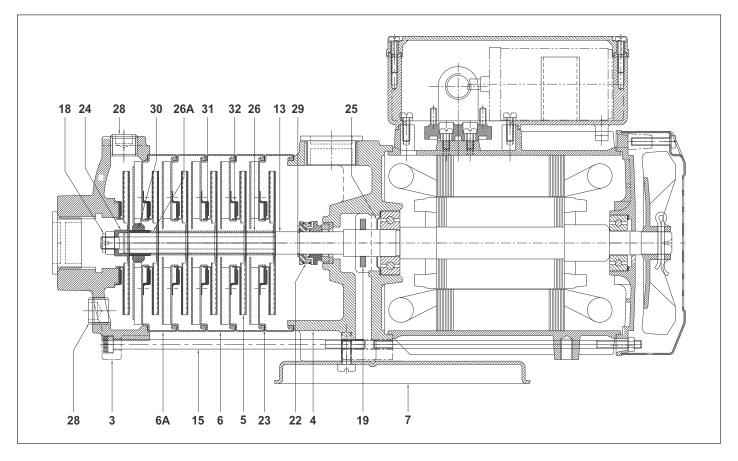


FIG.1 SECTIONAL DRAWING OF MH, MHI, MHN 2 & 4 PUMP

|      |                           | MATERIAL                 |                          |                          |  |
|------|---------------------------|--------------------------|--------------------------|--------------------------|--|
| POS. | COMPONENT                 | MH                       | MHI                      | MHN                      |  |
| 3    | Suction casing            | Cast iron ASTM 30B       | Stainless steel CF 8     | Stainless steel CF 8M    |  |
| 4    | Discharge casing          | Cast iron ASTM 30B       | Stainless steel CF 8     | Stainless steel CF 8M    |  |
| 5    | Impeller                  | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 6    | Stage casing              | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 6A   | Stage casing with bearing | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 7    | Base plate                | Steel                    | Steel                    | Steel                    |  |
| 13   | Pump shaft                | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 15   | Pump fitting stud         | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 304 |  |
| 18   | Impeller lock nut         | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 19   | Water thrower             | NBR                      | NBR                      | NBR                      |  |
| 22   | Mechanical shaft seal     | Carbon/Ceramic/NBR       | Carbon/Ceramic/NBR       | Carbon/Ceramic/NBR       |  |
| 23   | Stage casing packing      | C.A.F                    | C.A.F                    | C.A.F                    |  |
| 24   | Impeller lock bush        | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 25   | Bearing washer            | Steel                    | Steel                    | Steel                    |  |
| 26   | Impeller support bush     | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 26A  | Impeller support bush     | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 28   | Water filling plug        | Steel                    | Stainless steel AISI 304 | Stainless steel AISI 316 |  |
| 29   | Circlip                   | Stainless steel AISI 316 | Stainless steel AISI 316 | Stainless steel AISI 316 |  |
| 30   | Bearing                   | -                        | -                        | -                        |  |
| 31   | Neck ring                 | PTFE                     | PTFE                     | PTFE                     |  |
| 32   | Neck ring retainer        | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |  |

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#### SECTIONAL DRAWING & MATERIALS

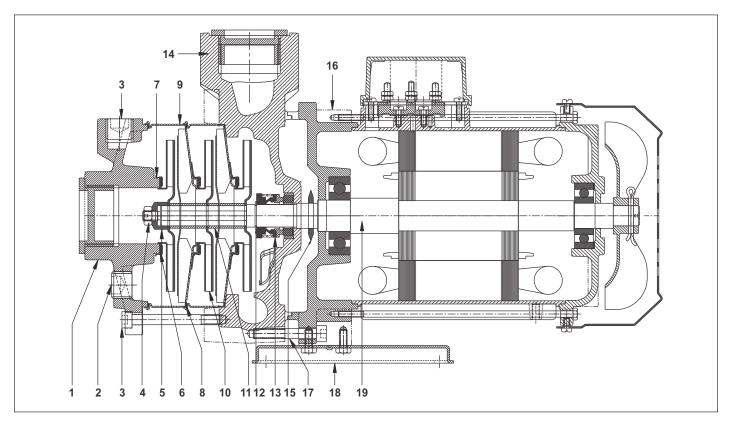


FIG.2 SECTIONAL DRAWING OF MH, MHI, MHN 10,15 & 25 PUMP

| 200  | COMPONENT                  | MATERIAL                 |                          |                          |
|------|----------------------------|--------------------------|--------------------------|--------------------------|
| POS. | COMPONENT                  | MH                       | MHI                      | MHN                      |
| 1    | Suction chamber            | Cast iron ASTM 30B       | Stainless steel CF 8     | Stainless steel CF 8M    |
| 2    | Water filling & drain plug | Steel                    | Steel                    | Steel                    |
| 3    | Pump fitting stud          | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 304 |
| 4    | Impeller lock nut          | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 5    | Impeller lock bush         | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 6    | Neck ring                  | PTFE                     | PTFE                     | PTFE                     |
| 7    | Neck ring retainer         | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 8    | Stage casing packing       | C.A.F                    | C.A.F                    | C.A.F                    |
| 9    | Stage casing               | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 10   | Impeller                   | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 11   | Impeller support bush      | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 12   | Circlip                    | Stainless steel AISI 316 | Stainless steel AISI 316 | Stainless steel AISI 316 |
| 13   | Mechanical shaft seal      | Carbon/Ceramic/NBR       | Carbon/Ceramic/NBR       | Carbon/Ceramic/NBR       |
| 14   | Volute                     | Cast iron ASTM 30B       | Stainless steel CF 8     | Stainless steel CF 8M    |
| 15   | Water thrower              | NBR                      | NBR                      | NBR                      |
| 16   | Adaptor                    | Cast iron ASTM 30B       | Stainless steel CF 8     | Stainless steel CF 8M    |
| 17   | Adaptor joint stud         | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 304 |
| 18   | Base plate                 | Steel                    | Steel                    | Steel                    |
| 19   | Pump shaft                 | Stainless steel AISI 304 | Stainless steel AISI 304 | Stainless steel AISI 316 |

### **LUBI INDUSTRIES LLP**

Near Kalyan Mills, Naroda Road, Ahmedabad-380 025, INDIA. Phone: +91 - 79 - 61700100, Fax No.: +91 - 79 - 61700399.

Sales Enquiries: indsales@lubipumps.com, expsales@lubipumps.com

www.lubipumps.com

Product Improvement is a continuous process at 'LUBI'. The data given in this publication is therefore subject to revision.





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