

# 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.

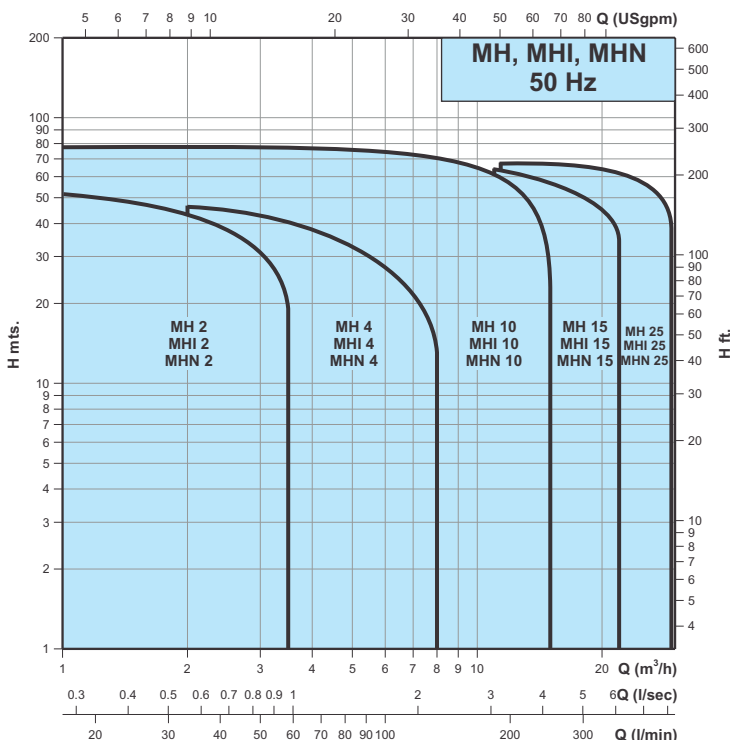
## APPLICATIONS

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  
 Ambient temperature : Max. +55°C  
 Liquid temperature range: 0°C to +90°C

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

Pump type	Maximum operating pressure	
	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	MH 2, MHI 2, MHN 2	MH 4, MHI 4, MHN 4	MH 10, MHI 10, MHN 10	MH 15, MHI 15, MHN 15	MH 25, MHI 25, MHN 25
Axial suction port	Rp 1	Rp 1¼	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.

Rated speed : 2900 rpm  
 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  
 Supply frequency : 50 Hz

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

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

## SECTIONAL DRAWING & MATERIALS

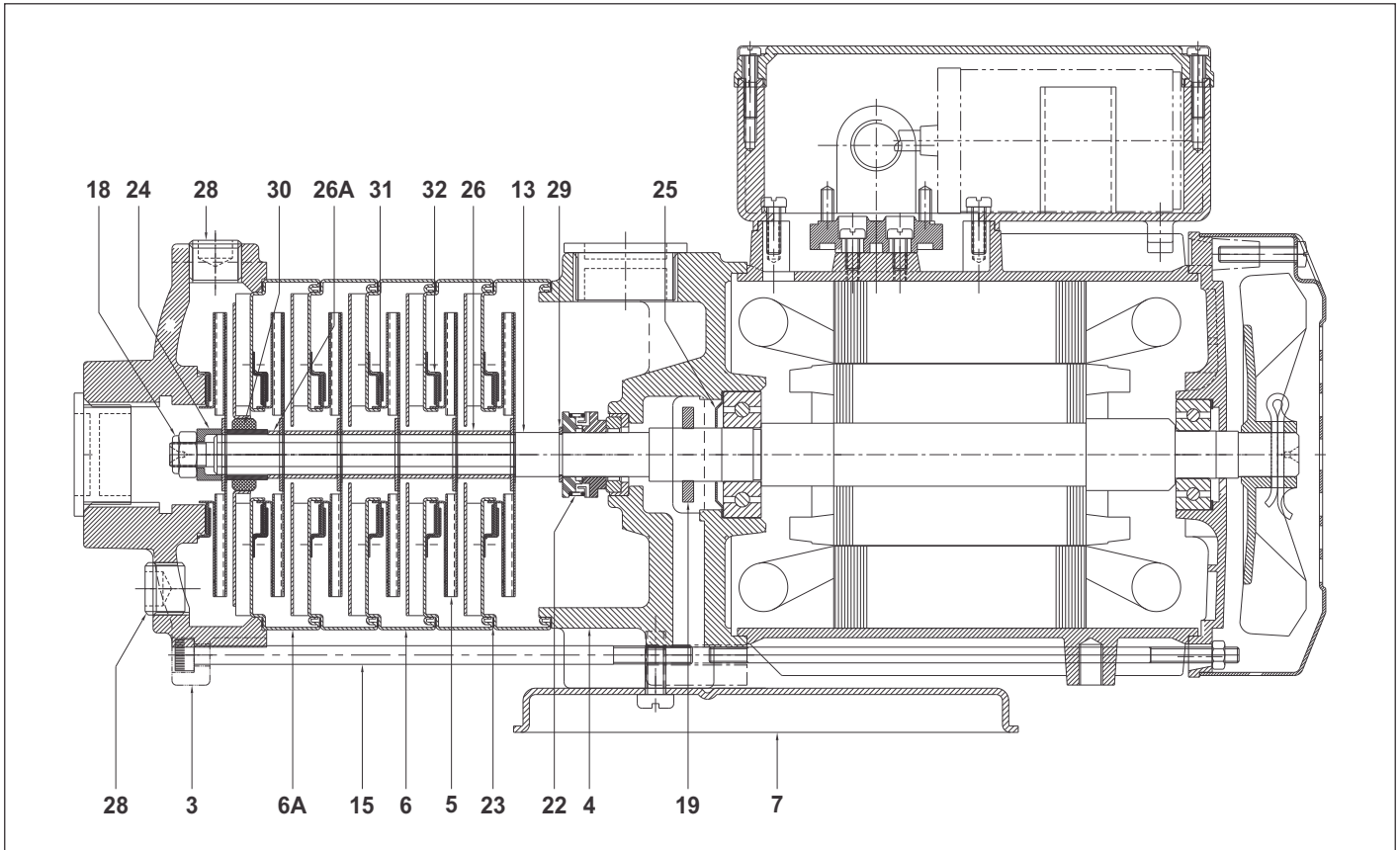


FIG.1 SECTIONAL DRAWING OF MH, MHI, MHN 2 & 4 PUMP

POS.	COMPONENT	MATERIAL		
		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

## SECTIONAL DRAWING & MATERIALS

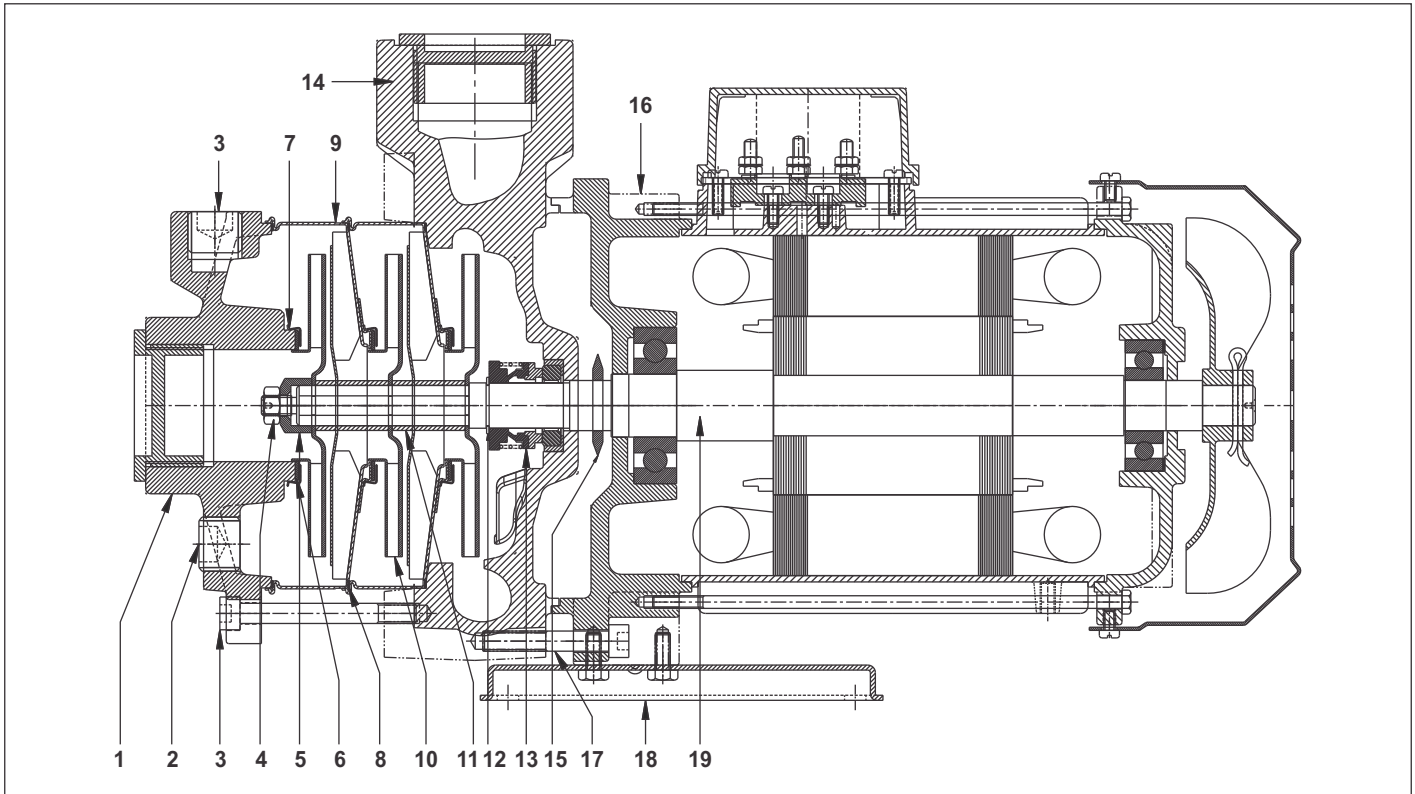


FIG.2 SECTIONAL DRAWING OF MH, MHI, MHN 10,15 & 25 PUMP

POS.	COMPONENT	MATERIAL		
		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

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