

# MVR SERIES

Vertical Multi-stage Centrifugal Pumps  
50 Hz



Available with Your Trusted Partner for Water Treatment Solutions:



### INTRODUCTION

The Lubi **MVR** pumps are non-self priming, vertical, multistage, high head centrifugal pumps.

Motor and pump are close coupled in a convenient and compact design for quick installation in limited space.

These pumps are available from 0.75 to 2.20 kW for single phase as well as three phase power supply.

The pumps have radial suction port in the bottom part and radial discharge port in the top part.

Impellers, Guide Vanes, Bowl Casing & Pump Jackets are Stainless Steel AISI 304. Pump Shaft is Stainless Steel AISI 316.

The pump is fitted with a maintenance-free, mechanical shaft seal.

### APPLICATIONS

These pumps are widely used in high head duty conditions. The typical applications are as follow:

- Ultra-filtration systems
- Reverse osmosis systems
- Pressure boosting in domestic, civil and industrial water supply systems
- Washing and cleaning
- Hydro-pneumatic systems
- Sprinkler systems
- Irrigation.

### FEATURES AND BENEFITS

- State-of-the art compact design
- Quiet running
- Robust construction
- High performance hydraulics
- Easy to install
- Reliable operation
- Supplied with oval flanges
- Easy serviceability.

### OPERATING CONDITIONS

Flow range : 0.5 to 4 m<sup>3</sup>/h  
 Head range : Up to 139 metres  
 Ambient temperature : Max. +50°C  
 Liquid temperature range: 0°C to +90°C

### MOTOR

Motor type : TEFC 2-pole motor  
 Ratings : 1 phase - 0.75 to 2.20 kW  
           : 3 phase - 0.75 to 2.20 kW  
 Rated speed : 2900 rpm  
 Enclosure class : IP 55  
 Insulation class : F  
 Nominal voltage : 1 phase 230 V  
                   : 3 phase 415 V (Tolerance ±10%)  
 Supply frequency : 50 Hz  
 Duty / Rating : S1 / Continuous  
 Direction of rotation : Clockwise as seen from the motor rear end

### PUMPED LIQUIDS

MVR pumps are designed for non explosive liquids which are clean and thin without any solid particles. For aggressive liquid please ensure that material of construction is suitable for liquid to be pumped.

If liquids with a viscosity higher than that of water, are to be pumped the power consumption of the pump will increase with increase in viscosity. This will require a larger motor for the pump. Head, discharge and pump efficiency will reduce with increase in viscosity.

When pumping liquids with a density higher than that of water, the power consumption of the pump will increase at a ratio corresponding to increase in density.

### SECTIONAL DRAWING & MATERIALS

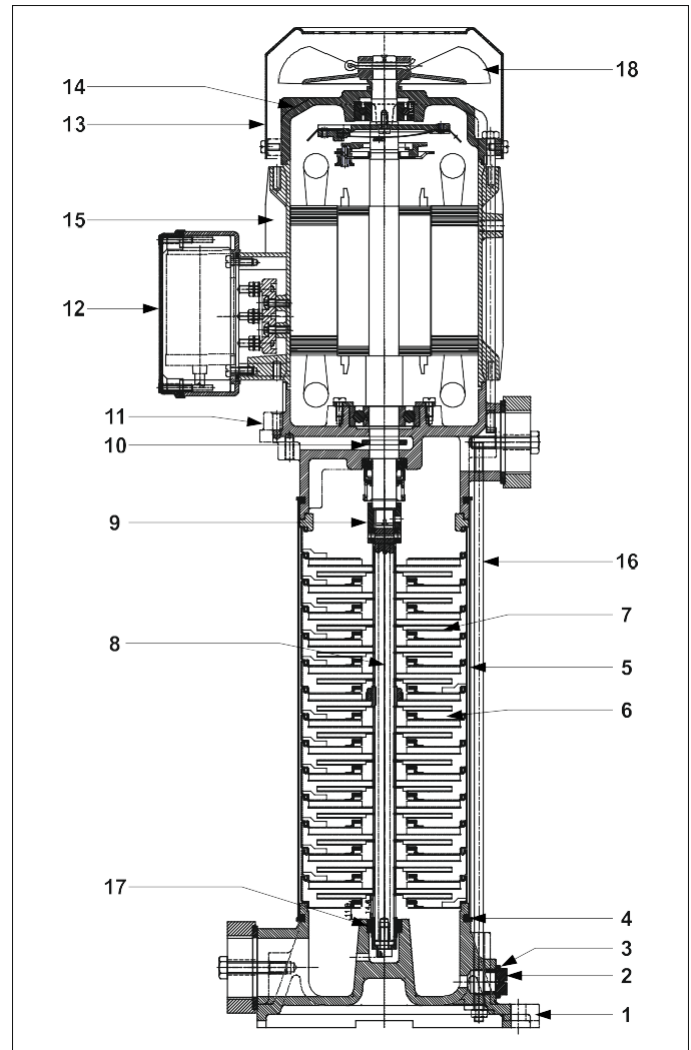
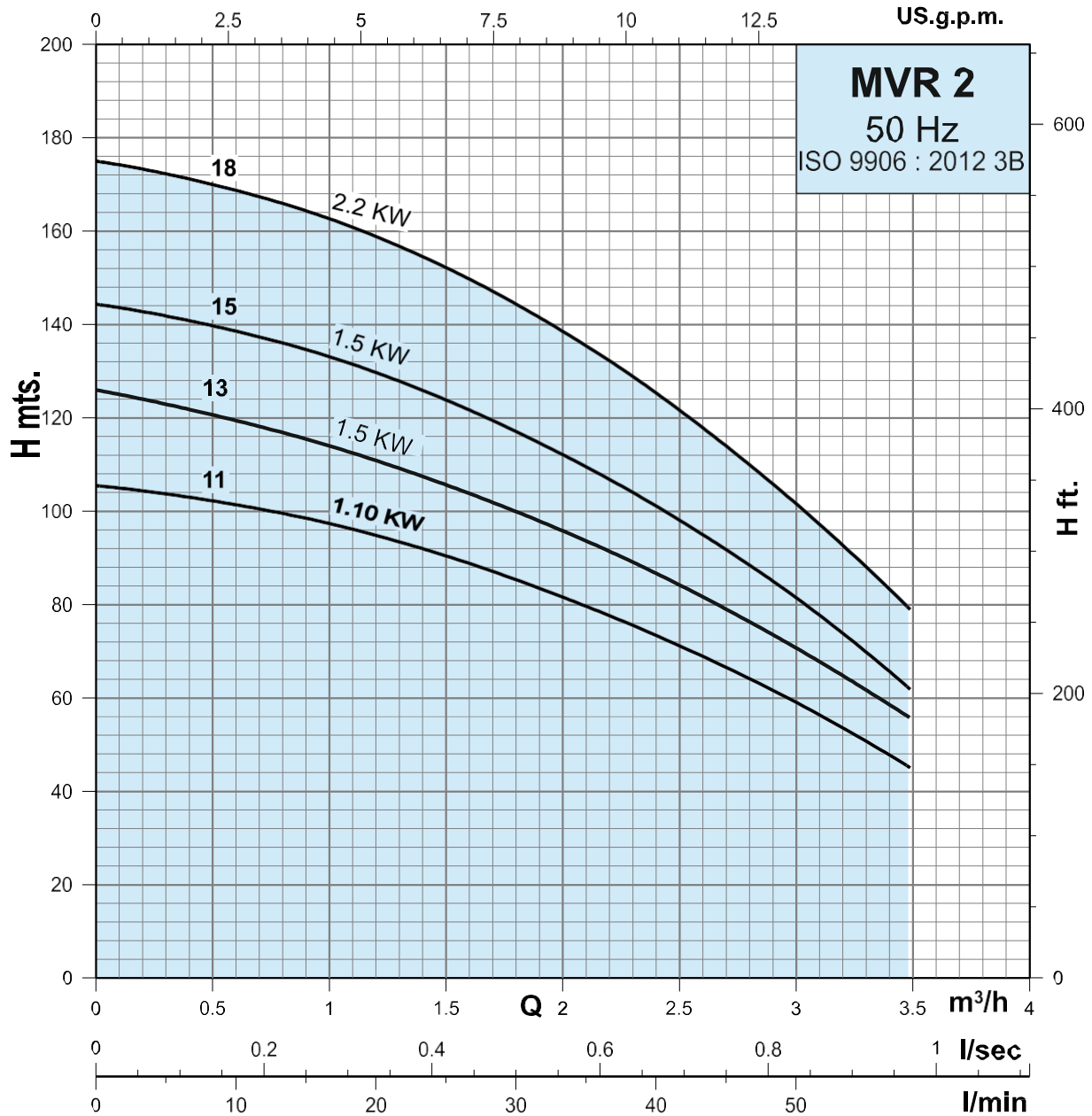


FIG.1 SECTIONAL DRAWING OF MVR PUMP

POS.	COMPONENT	MATERIAL
1	Suction chamber	Cast iron 200 ISO 185
2	Drainage Plug	Brass
3	"O" ring	NBR
4	Rubber ring	NBR
5	Jacket body	Stainless steel AISI 304
6	Casing & Guide vane	Stainless steel AISI 304
7	Impeller	Stainless steel AISI 304
8		Stainless steel AISI 316
9	Mechanical shaft seal	Carbon/Ceramic/NBR
10	Water thrower	NBR
11	Delivery chamber with bracket	Cast iron 200 ISO 185
12		Polyamide
13	Fan cover	Steel
14	Endshield	Cast iron
15	Stator body	Aluminum
16		Stainless steel
17	Bearing assembly	LTB4
18		Polypropylene

### PERFORMANCE CURVES



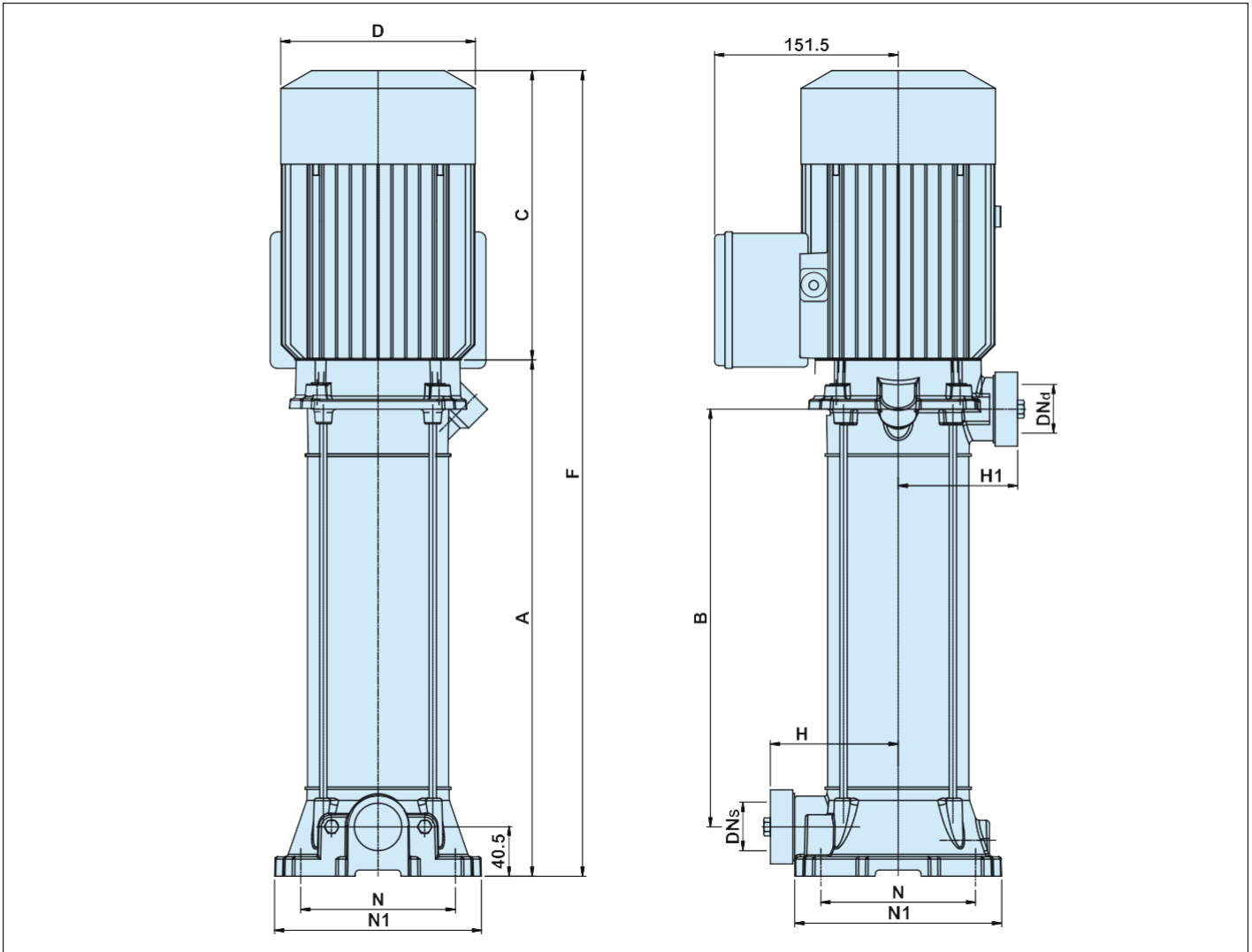
**CURVE CONDITIONS:**

- Tolerances in accordance with ISO 9906, Annex A.
  - The motors used for the measurement are standard motors.
  - Test results with clean cold water, without gas content.
- Measurements have been made with airless water at a temperature of 20°C.

### PERFORMANCE DATA

PUMP TYPE		MOTOR POWER		Q m³/h	1.0	1.6	2.3	3.0	3.5
SINGLE PHASE	THREE PHASE	kW	HP	Q l/min	16.7	26.7	38.3	50.0	58.3
MVR 2-11	MVRT 2-11	1.10	1.50	<b>H m</b>	98	89	76	60	45
MVR 2-13	MVRT 2-13	1.50	2.00		117	107	93	74	56
MVR 2-15	MVRT 2-15	1.50	2.00		134	122	105	83	62
MVR 2-18	MVRT 2-18	2.20	3.00		163	150	130	104	79

### DIMENSIONS & WEIGHT



PUMP TYPE		MOTOR POWER		FRAME SIZE	DNs [BSP]	DNd [BSP]	DIMENSIONS [mm]								GROSS WEIGHT [kg]	GROSS VOLUME [m <sup>3</sup> ]	
SINGLE PHASE	THREE PHASE	kW	HP				A	B	C	D	F	H	H1	N			N1
MVR 2-11	MVRT 2-11	1.10	1.50	80	1"	1"	398	316	238	160	635	105	98	127	170	30.0	0.0675
MVR 2-13	MVRT 2-13	1.50	2.00	80	1"	1"										31.2	0.0675
MVR 2-15	MVRT 2-15	1.50	2.00	80	1"	1"	470	388	238	160	707	105	98	127	170	31.2	0.0675
MVR 2-18	MVRT 2-18	2.20	3.00	90	1"	1"										36.8	0.0730

**Note:** All dimensions in mm unless otherwise noted.

Available with Your Trusted Partner for Water Treatment Solutions:



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