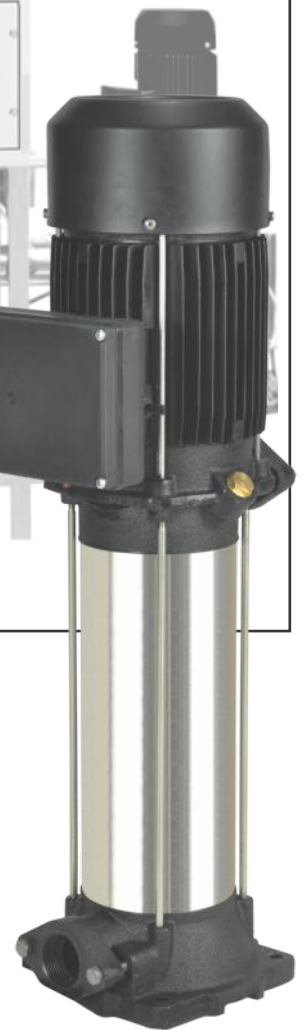
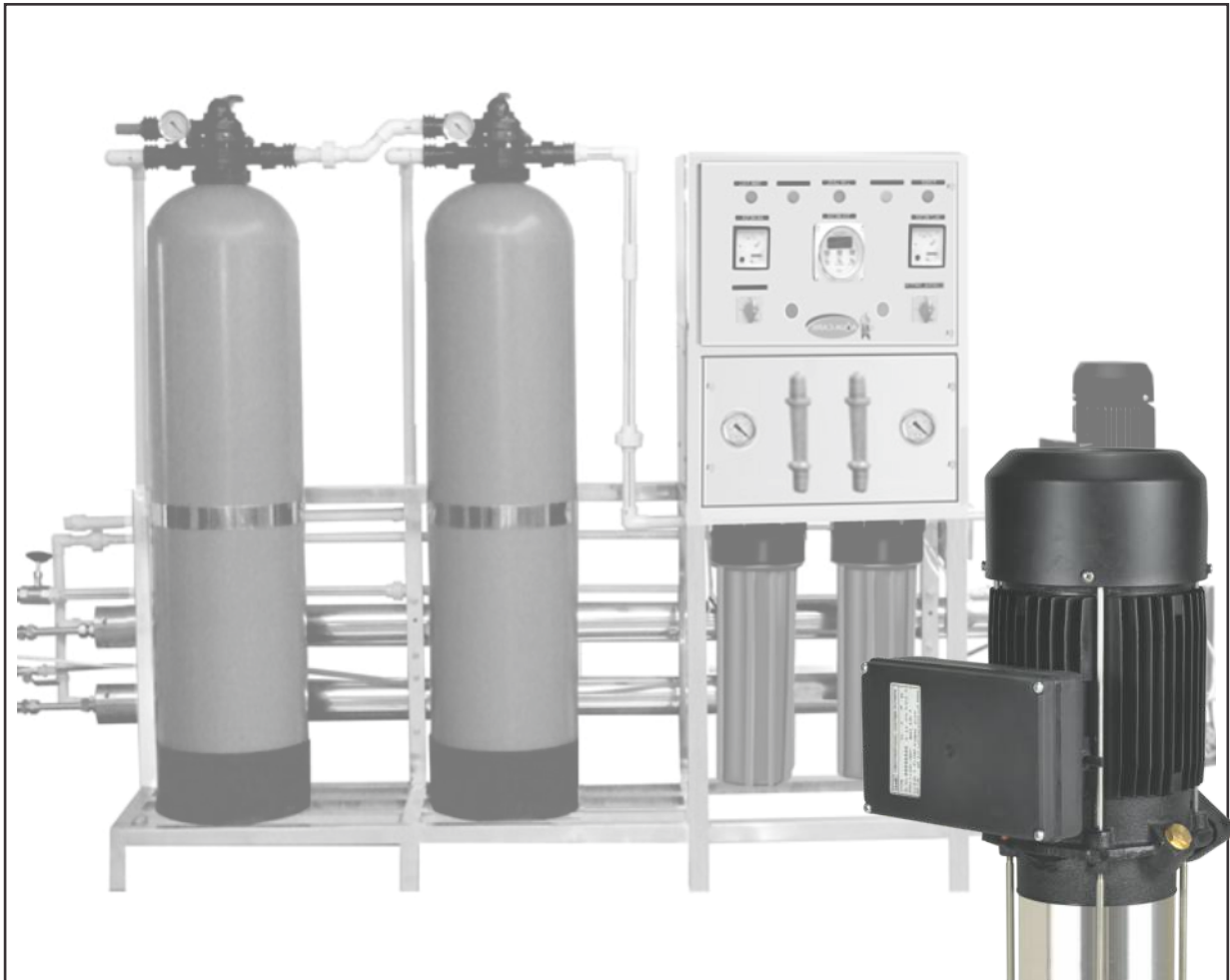
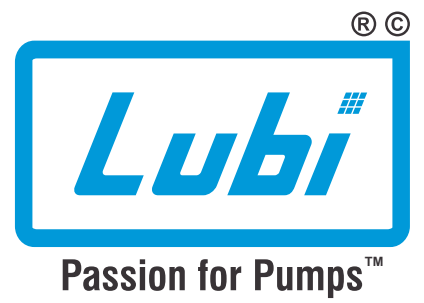


**MVNA SERIES**

**Vertical Multi-stage Centrifugal Pumps  
50 Hz**



### INTRODUCTION

The Lubi **MVNA** 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 0.37 to 1.50 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.

Pump body is made of stainless steel & impellers are made of stainless steel AISI 304. Motor shaft is made of stainless steel AISI 420. Guide vane is made of glass reinforced PPO.

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 - 0.37 to 1.50 kW  
           : 3 phase - 0.37 to 1.50 kW  
 Rated speed : 2900 rpm  
 Enclosure class : IP 55  
 Insulation class : F  
 Nominal voltage : 1 phase 230 V (240-140 V motor on request)  
 (Tolerance ±10%) 3 phase 415 V  
 Supply frequency : 50 Hz  
 Duty / Rating : S1 / Continuous  
 Direction of rotation: Clockwise as seen from the motor rear end

### PUMPED LIQUIDS

MVNA 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

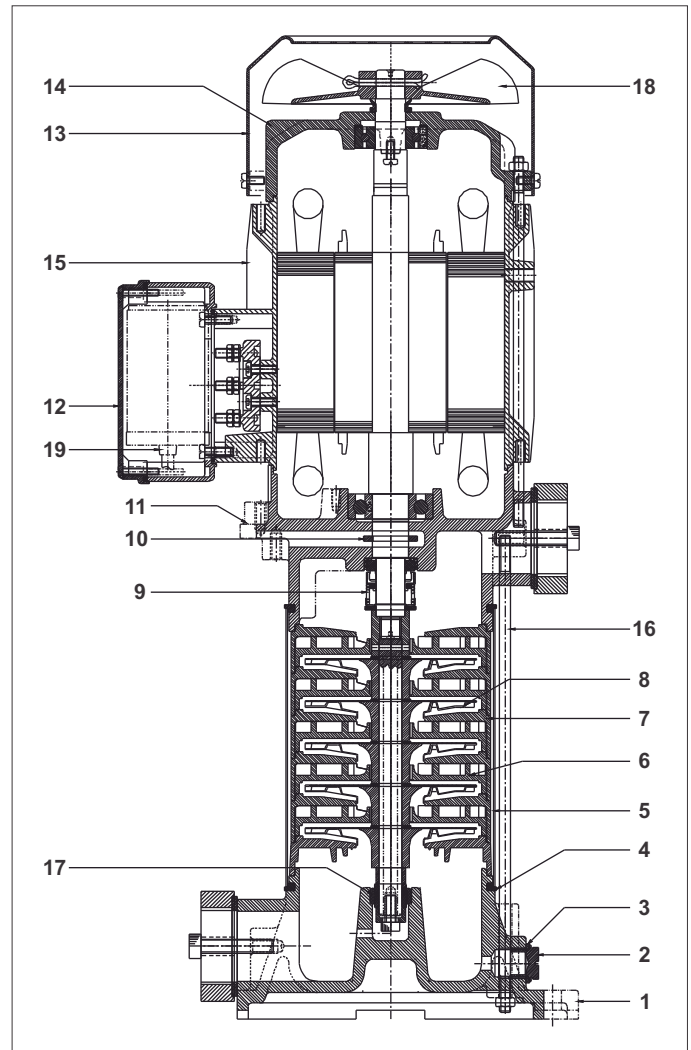
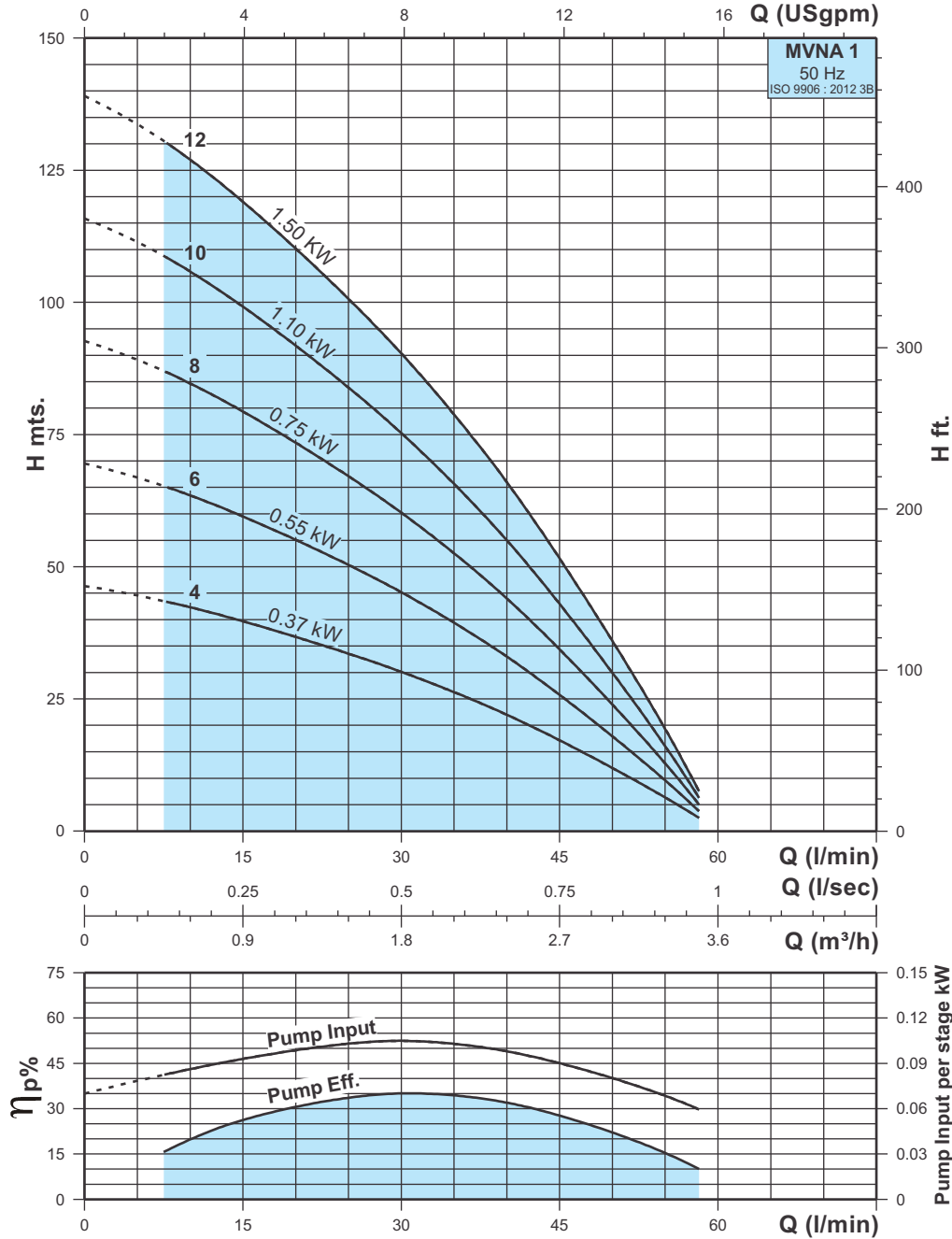


FIG.1 SECTIONAL DRAWING OF MVNA PUMP

POS.	COMPONENT	MATERIAL
1	Suction chamber	Cast iron 200 ISO 185
2	3/8" Plug	Brass
3	"O" ring	NBR
4	Rubber ring	NBR
5	Jacket body	Stainless steel
6	Guide vane	PPO 30% glass filled
7	Guide vane cover	PPO 30% glass filled
8	Impeller	Stainless steel AISI 304
9	Mechanical shaft seal	Carbon/Ceramic/NBR
10	Water thrower	NBR
11	Delivery chamber with bracket	Cast iron 200 ISO 185
12	Terminal box	A.B.S
13	Fan cover	Steel
14	Endshield	Cast iron
15	Stator body flange mounted	Aluminum
16	Pump fitting stud	Stainless steel AISI 304
17	Bearing assembly	Ceramic/Tungsten Carbide
18	Motor fan	Polypropylene
19	Capacitor	-

## PERFORMANCE CURVES



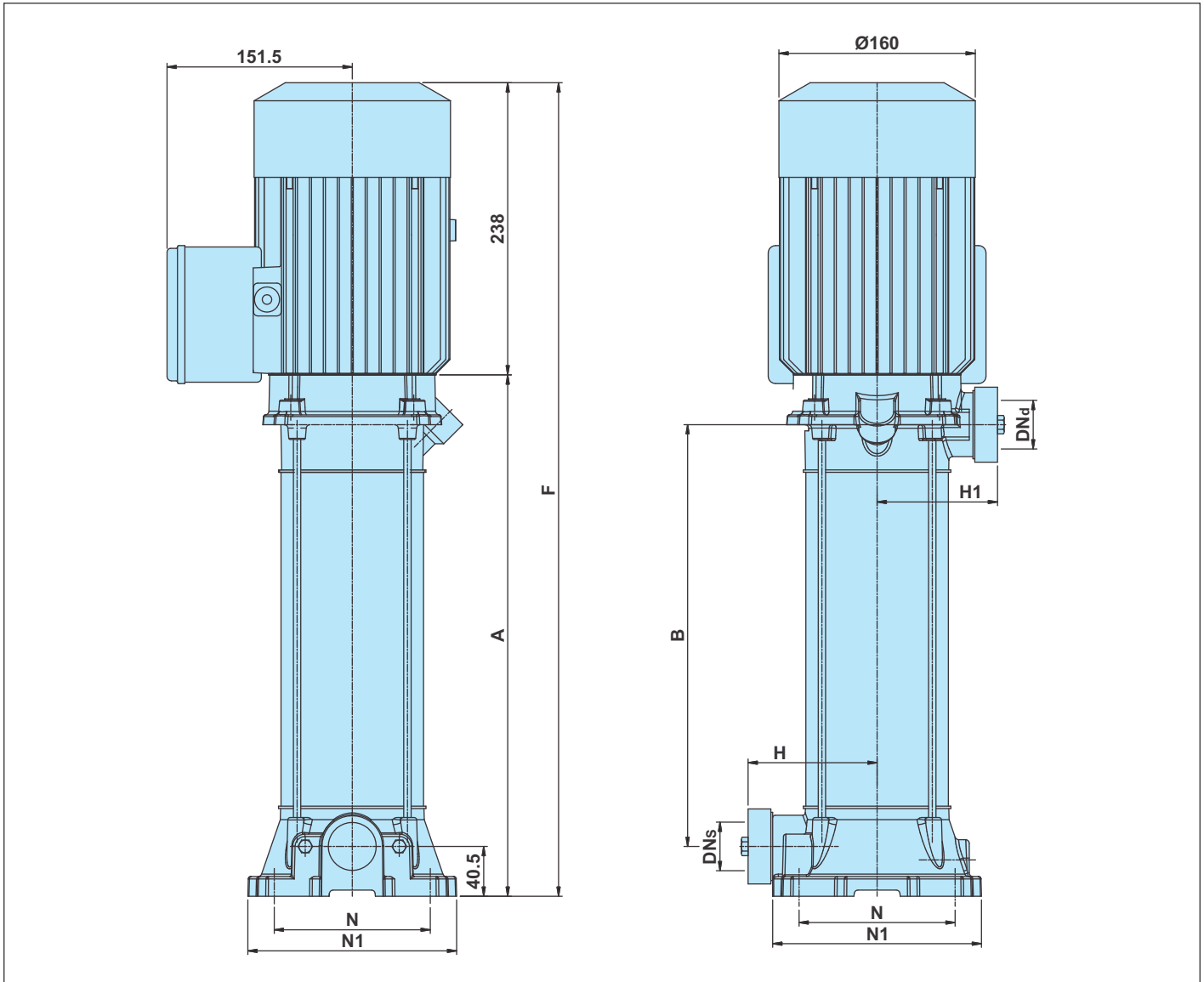
### CURVE CONDITIONS:

- 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.
- Head and power values valid for liquids with density  $\rho = 1,0 \text{ kg/dm}^3$  and kinematic viscosity  $\nu = \max 1 \text{ mm}^2/\text{s}$  (1 cSt).
- The QH curves apply to a rated motor speed of  $2900 \text{ min}^{-1}$ .

## PERFORMANCE DATA

PUMP TYPE		MOTOR POWER		Q m³/h	0	0.5	0.8	1.2	1.8	2.4	3.0	3.5
SINGLE PHASE	THREE PHASE	kW	HP	Q l/min	0	8	13	20	30	40	50	58
MVNA 1-4	MVNAT 1-4	0.37	0.50	H m	46	43	41	37	30	22	12	3
MVNA 1-6	MVNAT 1-6	0.55	0.75		70	65	61	55	45	33	18	4
MVNA 1-8	MVNAT 1-8	0.75	1.00		93	87	82	73	60	44	24	5
MVNA 1-10	MVNAT 1-10	1.10	1.50		116	108	102	92	75	55	30	6
MVNA 1-12	MVNAT 1-12	1.50	2.00		139	130	122	110	90	66	35	8

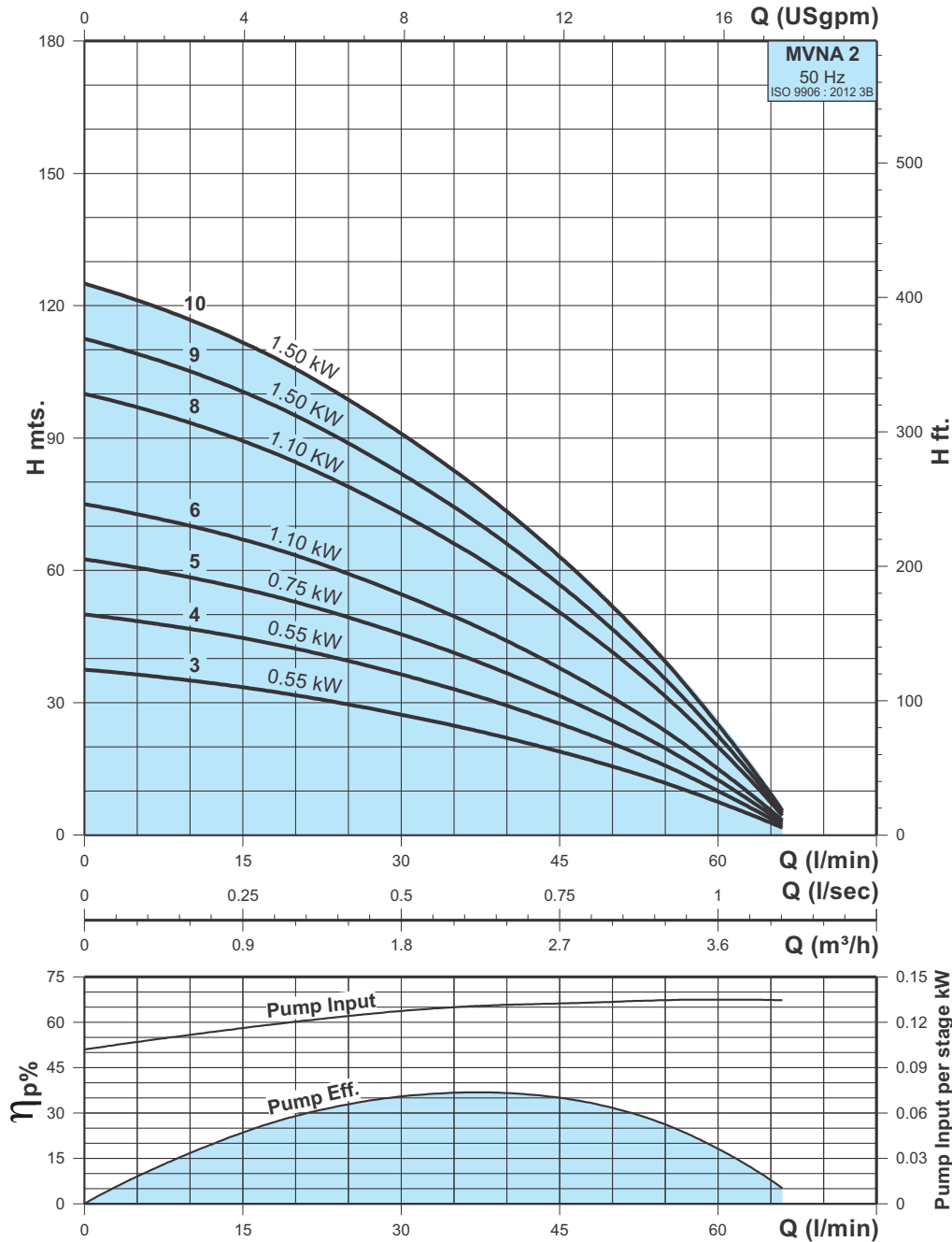
### DIMENSIONS & WEIGHT



PUMP TYPE		MOTOR POWER		FRAME SIZE	DN <sub>s</sub> [BSP]	DN <sub>d</sub> [BSP]	DIMENSIONS [mm]						GROSS WEIGHT [kg]	GROSS VOLUME [m <sup>3</sup> ]	
SINGLE PHASE	THREE PHASE	kW	HP				A	B	F	H	H1	N			N1
MVNA 1-4	MVNAT 1-4	0.37	0.50	80	1¼"	1¼"	272	191	510	105	98	127	170	19.1	0.0238
MVNA 1-6	MVNAT 1-6	0.55	0.75	80	1¼"	1¼"	312	231	550	105	98	127	170	19.4	0.0250
MVNA 1-8	MVNAT 1-8	0.75	1.00	80	1¼"	1¼"	353	272	591	105	98	127	170	20.3	0.0261
MVNA 1-10	MVNAT 1-10	1.10	1.50	80	1¼"	1¼"	394	313	632	105	98	127	170	20.3	0.0295
MVNA 1-12	MVNAT 1-12	1.50	2.00	80	1¼"	1¼"	435	454	673	105	98	127	170	23.5	0.0317

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

## PERFORMANCE CURVES



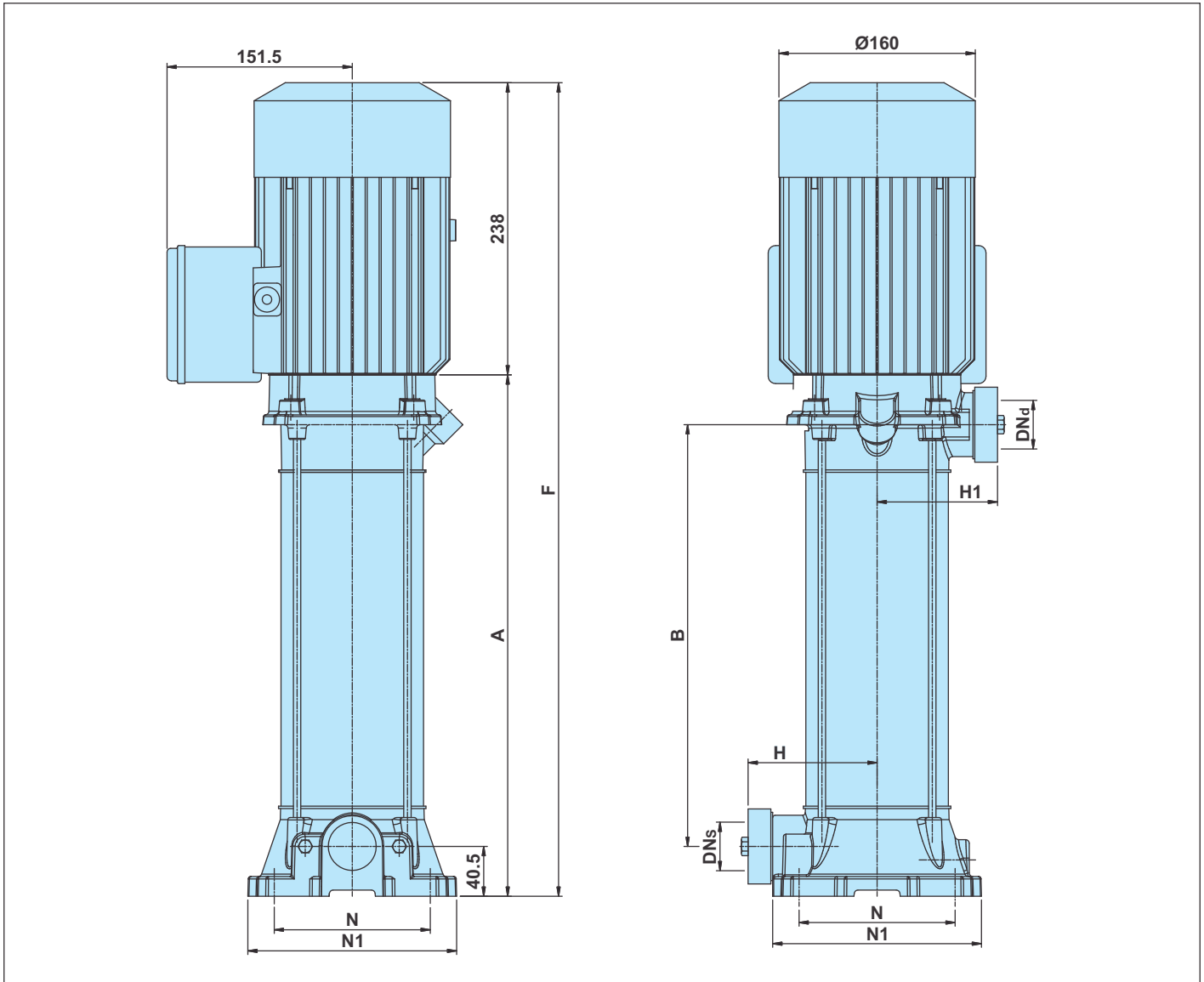
### CURVE CONDITIONS:

- 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.
- Head and power values valid for liquids with density  $\rho = 1,0 \text{ kg/dm}^3$  and kinematic viscosity  $\nu = \max 1 \text{ mm}^2/\text{s}$  (1 cSt).
- The QH curves apply to a rated motor speed of  $2900 \text{ min}^{-1}$ .

## PERFORMANCE DATA

PUMP TYPE		MOTOR POWER		Q m³/h	0	1.2	1.8	2.3	3	3.6	4
SINGLE PHASE	THREE PHASE	kW	HP	Q l/min	0	20	30	38	50	60	66
MVNA 2-3	MVNAT 2-3	0.55	0.75	<b>H m</b>	38	32	27	23	15	7	2
MVNA 2-4	MVNAT 2-4	0.55	0.75		50	42	37	31	21	10	2
MVNA 2-5	MVNAT 2-5	0.75	1.00		63	53	45	39	26	12	3
MVNA 2-6	MVNAT 2-6	1.10	1.50		75	63	55	47	31	15	3
MVNA 2-8	MVNAT 2-8	1.10	1.50		100	84	73	62	42	20	4
MVNA 2-9	MVNAT 2-9	1.50	2.00		113	95	82	70	47	22	5
MVNA 2-10	MVNAT 2-10	1.50	2.00		125	105	91	78	52	25	6

## DIMENSIONS & WEIGHT



PUMP TYPE		MOTOR POWER		FRAME SIZE	DN <sub>s</sub> [BSP]	DN <sub>d</sub> [BSP]	DIMENSIONS [mm]						GROSS WEIGHT [kg]	GROSS VOLUME [m <sup>3</sup> ]	
SINGLE PHASE	THREE PHASE	kW	HP				A	B	F	H	H1	N			N1
MVNA 2-3	MVNAT 2-3	0.55	0.75	80	1 1/4"	1 1/4"	260	179	498	105	98	127	170	19.1	0.0238
MVNA 2-4	MVNAT 2-4	0.55	0.75	80	1 1/4"	1 1/4"	283	202	521	105	98	127	170	19.4	0.0250
MVNA 2-5	MVNAT 2-5	0.75	1.00	80	1 1/4"	1 1/4"	307	226	545	105	98	127	170	20.3	0.0261
MVNA 2-6	MVNAT 2-6	1.10	1.50	80	1 1/4"	1 1/4"	330	249	568	105	98	127	170	20.5	0.0272
MVNA 2-8	MVNAT 2-8	1.10	1.50	80	1 1/4"	1 1/4"	377	296	615	105	98	127	170	20.3	0.0295
MVNA 2-9	MVNAT 2-9	1.50	2.00	80	1 1/4"	1 1/4"	400	320	638	105	98	127	170	22.5	0.0306
MVNA 2-10	MVNAT 2-10	1.50	2.00	80	1 1/4"	1 1/4"	424	343	662	105	98	127	170	23.5	0.0317

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

## 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](mailto:indsales@lubipumps.com), [expsales@lubipumps.com](mailto:expsales@lubipumps.com)

[www.lubipumps.com](http://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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ISO 9001



ISO 14001

**Customer Care Number : 09824200800**