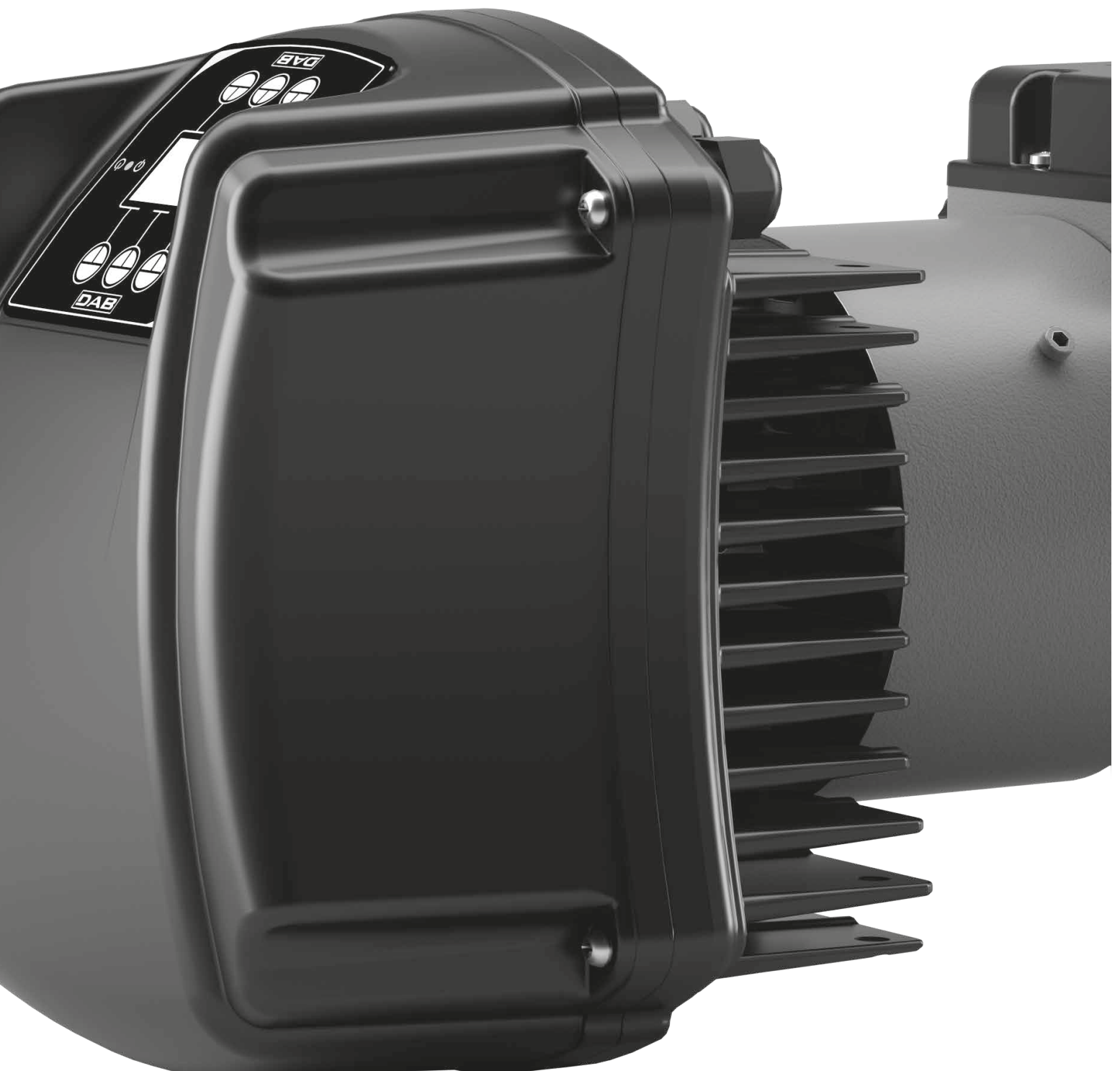


# ALME / ALPE

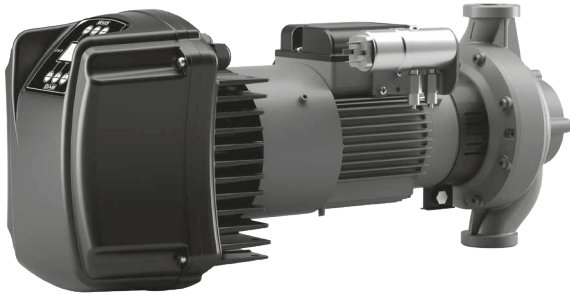
IN-LINE PUMPS





# ALME / ALPE

## ELECTRONIC IN-LINE PUMPS FOR CIRCULATION SYSTEMS



### TECHNICAL DATA

**Flow rate (range):** from 1 m<sup>3</sup>/h to 8,4 m<sup>3</sup>/h

**Head:** Up to 21 m

**Type of pumped liquid:** clean, free from solid or abrasive substances, non-viscous, non-aggressive, non-crystallized

**Glycol percentage (maximum):** 50%

**Liquid temperature (range):** from -15°C to +120°C

**Maximum ambient temperature:** +40°C

**Operation pressure (maximum):** 10 bar / 1000 kPa

**Flanging or threading:** threading GAS 2" M

**Motor protection class:** IPX5

**Motor insulation class:** F

**Impeller material:** technopolymer

**Single phase power input:** 230 V 50 Hz

**Type of installation:** fixed in horizontal position

Electronic in-line pumps for water recirculation in heating or conditioning systems and where there are solar thermal panels (solar collectors). Possibility of remote control thanks to the DConnect service (DConnect Box supplied separately).

### CONSTRUCTION FEATURES OF THE PUMP

Pump body and motor support in cast iron. Threaded suction and delivery port. Technopolymer impeller, silicon carbide/silicon carbide seal.

### CONSTRUCTION FEATURES OF THE MOTOR

Closed and air-cooled asynchronous motor, it is available with two pole (ALPE) or four-pole (ALME). Rotor mounted on ball bearings greased for life. Thermo-ampereometric protection and capacitor incorporated in the single-phase version.

### CONSTRUCTION FEATURES OF THE ELECTRONIC

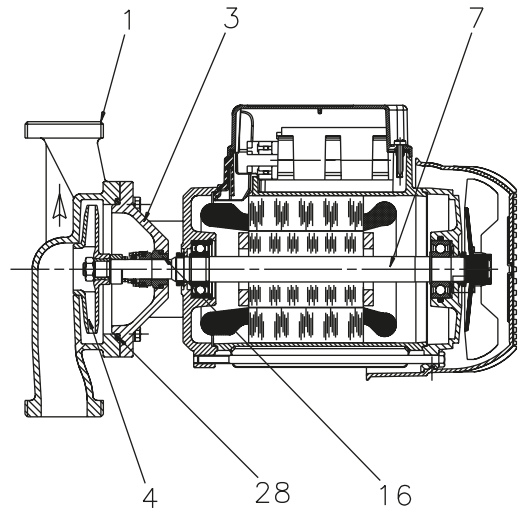
MCE-C variable frequency drive installed as standard for greater pump operating efficiency. It is equipped with a display for configuration and control. MEC-C is settable in pressure regulation mode, differentiates constant, constant curve, constant curve with external analogue signal, with the proportional differential pressure. The variable frequency drive allows energy savings and protection against water hammer. It must be mounted on the motor fan cover to take advantage of the cooling. It is possible to connect two MCE-C variable frequency drive together (through a special connection cable, supplied separately) for the creation of twin units. Compatibility with the DConnect service (DConnect Box supplied separately).

# ALME / ALPE

## ELECTRONIC IN-LINE PUMPS FOR CIRCULATION SYSTEMS

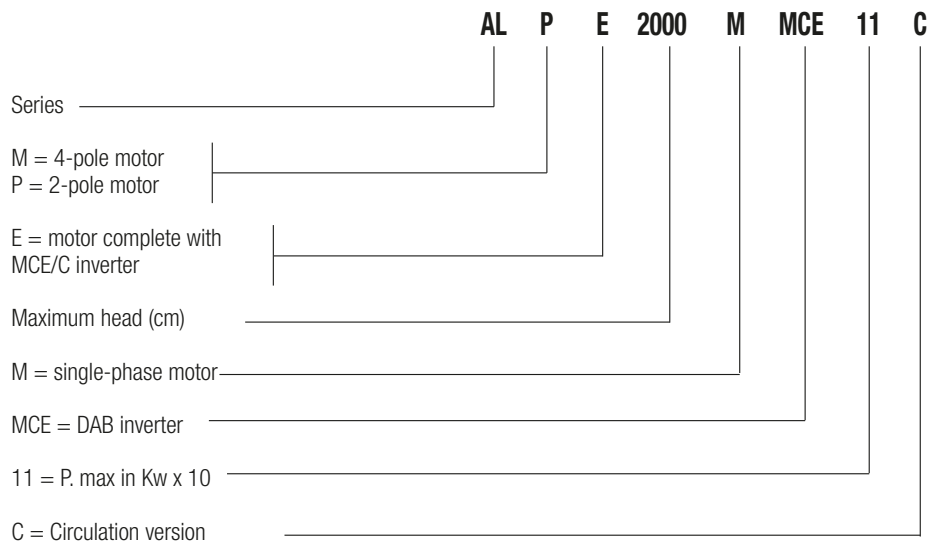
### MATERIALS

N.	PARTS	MATERIALS
1	PUMP BODY	CAST IRON 250 UNI ISO 185
3	SUPPORT	CAST IRON 250 UNI ISO 185
4	IMPELLER	TECHNOPOLYMER
7	SHAFT WITH ROTOR	AISI 316 STAINLESS STEEL
16	MECHANICAL SEAL	SILICON CARBIDE / SILICON CARBIDE
28	OR RING	EPDM RUBBER



\* In contact with the liquid

### - Legend: (example)



### Installation: fixed, horizontal position.



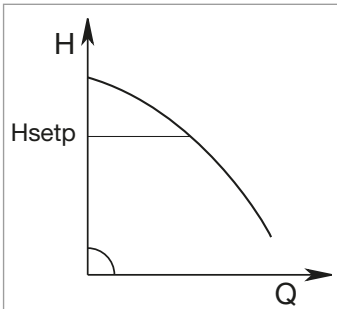
### MCE/C INVERTER

#### MODES OF OPERATION

All the functions listed below can be consulted by the users (including less experienced ones) by simply scrolling through the MCE/C menu. The calibration and the modification of the parameters are protected, and can only be completed by expert users.

#### 1 - $\Delta P$ -c constant differential pressure adjustment mode

The  $\Delta P$ -c adjustment mode keeps the differential pressure of the system constantly at the H (setp) value set, even in case of variation of the flow rate. This is the standard adjustment used. It can be set directly from the MCE/C control panel. The inverter keeps the differential pressure (H setp) constant even in case of flow variation.



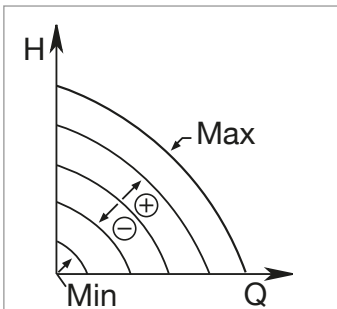
This adjustment is particularly indicated for the following systems:

- a. two-pipe heating systems with thermostat valves
- b. underfloor heating systems with thermostat valves
- c. single-pipe heating systems with thermostat valves and calibration valves
- d. systems with primary circuit pumps

#### 2 - Constant curve adjustment modes

##### 2.1 - Constant curve adjustment

The rotation speed is kept at a constant number of revolutions. This rotation speed can be set between a minimum value and the nominal frequency of the circulation pump (e.g. between 15 Hz and 50 Hz). This mode can be set using the control panel on the MCE cover.

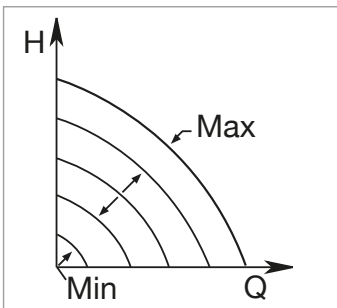


##### 2.2 - Adjustment of the constant curve with external analogue signal

The rotation speed is kept at a constant number of revolution in proportion with the voltage of the external analogue signal.

The rotation speed changes in a linear way, between the nominal frequency of the pump when  $V_{in} = 10$  V, and the minimum frequency when  $V_{in} = 0$  V.

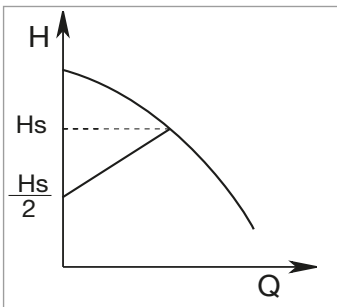
This mode can be set using the control panel on the MCE cover.



#### 3 - $\Delta P$ -v \* proportional differential pressure adjustment mode

With  $\Delta P$ -v adjustment mode, with the variation of the flow rate, the value of the delivery of the head also varies in a linear manner, from Hsetp to Hsetp/2.

\* in order to know the availability of the function on specific models contact our customer service.



For more information refer to the technical appendix.

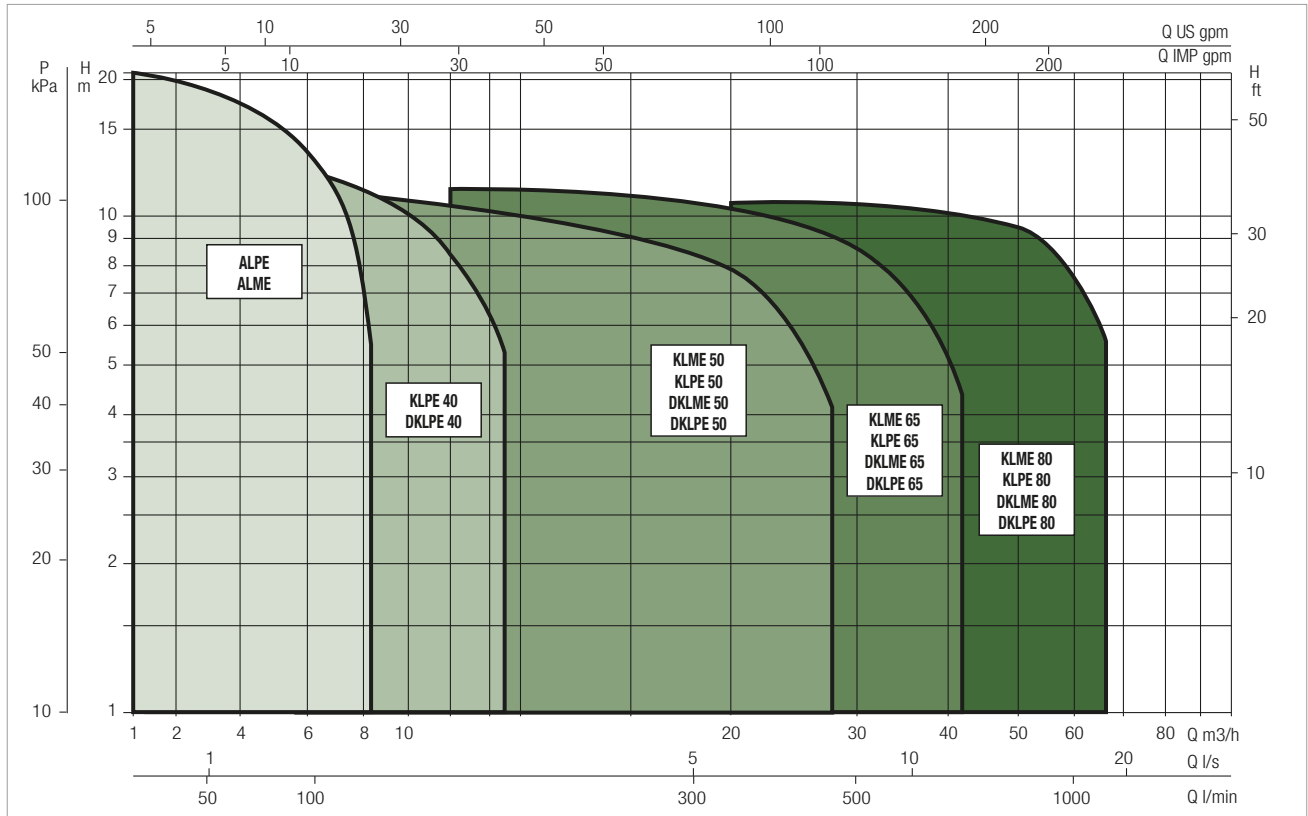
# ELECTRIC IN-LINE PUMPS

## ELECTRONIC IN-LINE PUMPS FOR CIRCULATION SYSTEMS

### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE

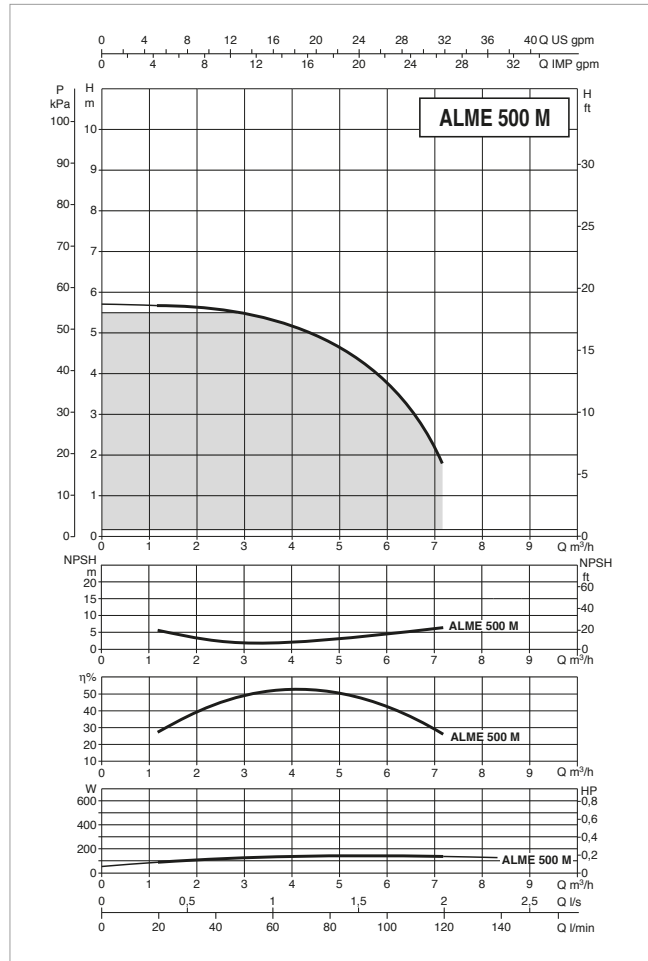
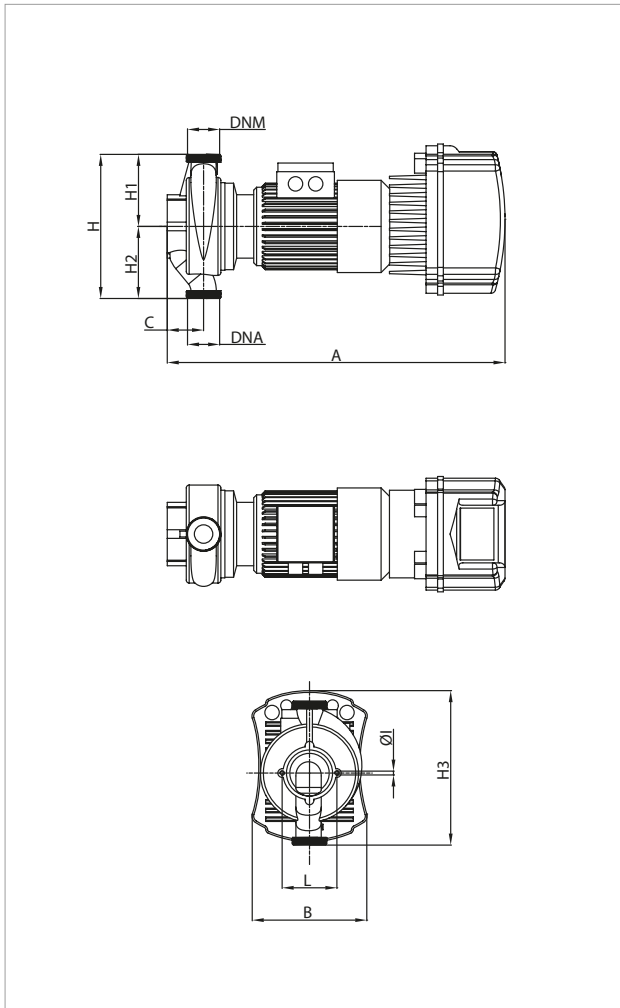


### SELECTION TABLE - ALME / ALPE

MODEL	Q (m³/h)	0	1,2	2,4	3,6	4,8	6	7,2	8,4
	(l/min)	0	20	40	60	80	100	120	140
ALME 500 M MCE11/C	H (m)	5,5	5,4	5,3	4,8	4,1	3	1,5	-
ALPE 2000 M MCE11/C		21,1	20,6	19,6	18	16	13,8	10,5	5,3

# ALME 500 - ELECTRONIC IN-LINE PUMPS FOR CIRCULATION SYSTEMS

Pumped liquid temperature range: from -15 °C to +120 °C - Maximum ambient temperature: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

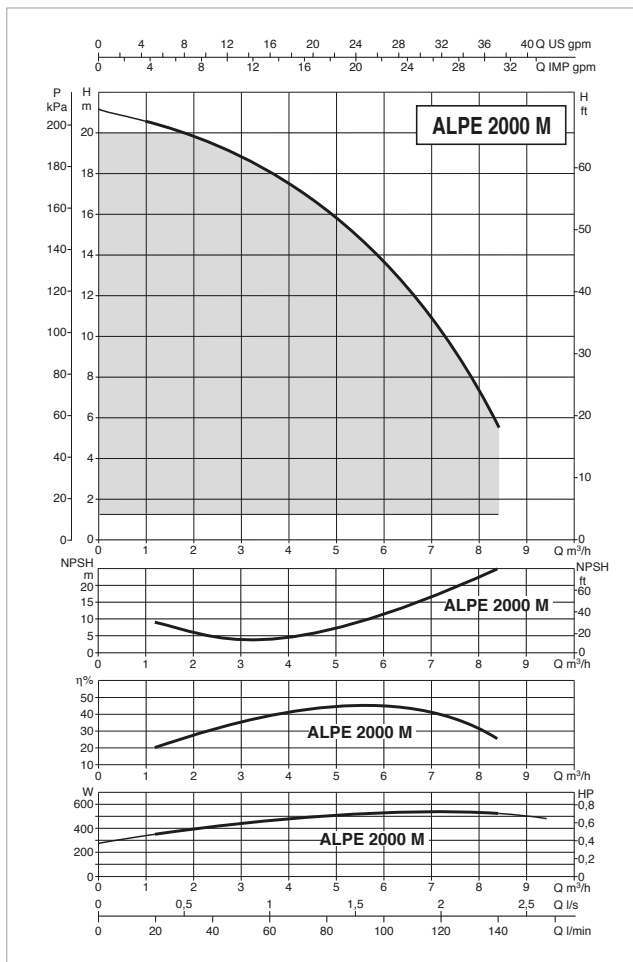
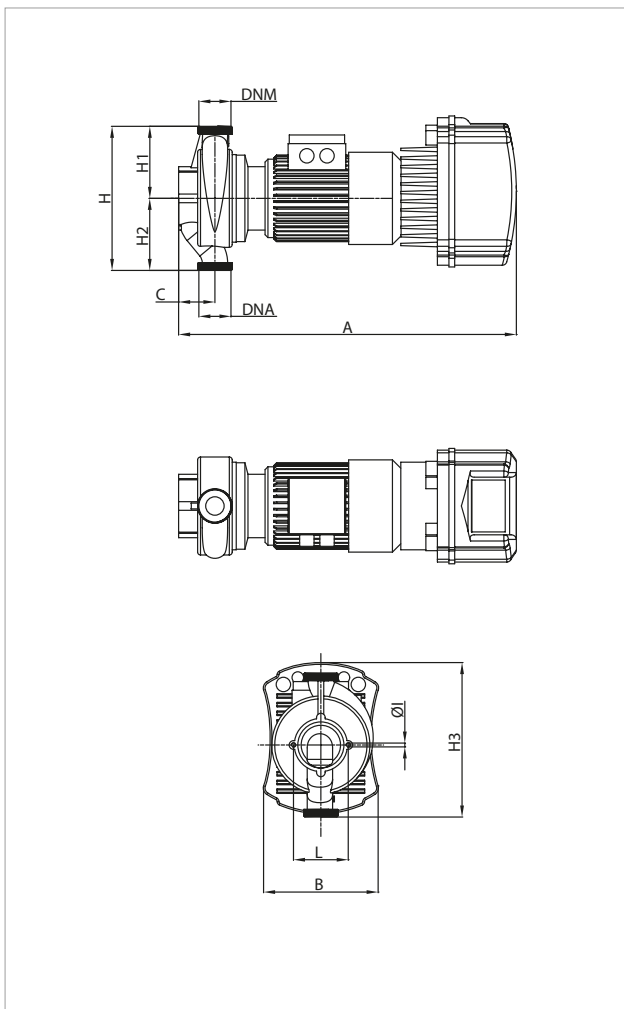
MODEL	ELECTRICAL DATA						
	POWER INPUT 50Hz	POLES	n r.p.m.	P1 MAX kW	P2 NOMINAL		In A
					kW	HP	
ALME 500 M MCE11/C*	1 x 230 V ~	4	1425	0,2	0,25	0,33	3,2

\* Three-phase version on request

MODEL	A	B	C	L	I Ø	H	H1	H2	H3	DNA	DNM	PACKING DIMENSIONS			VOLUME (m³)	WEIGHT Kg
												L/A	L/B	H		
ALME 500 M MCE11/C	586	200	63	95	8	250	125	125	256	2" M	2" M	600	234	275	0,039	19,5

# ALPE 2000 - ELECTRONIC IN-LINE PUMPS FOR CIRCULATION SYSTEMS

Pumped liquid temperature range: from -15 °C to +120 °C - Maximum ambient temperature: +40°C



The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA						
	POWER INPUT 50Hz	POLES	n r.p.m.	P1 MAX kW	P2 NOMINAL		In A
					kW	HP	
ALPE 2000 M MCE11/C*	1 x 230 V ~	2	2870	0,69	0,55	0,75	6,4

\* Three-phase version on request

MODEL	A	B	C	L	I Ø	H	H1	H2	H3	DNA	DNM	PACKING DIMENSIONS			VOLUME (m <sup>3</sup> )	WEIGHT Kg
												L/A	L/B	H		
ALPE 2000 M MCE11/C	586	200	63	95	8	250	125	125	256	2" M	2" M	600	234	275	0,039	19,5





# DWA

PUMPS SELECTOR

On-line selection tool



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