

# ARGAL

CHEMICAL PUMPS

## BASIS RANGE TMB SERIES



*magnetic driven pumps*

The pumps "TMB" belong to Argal's BASIS range and feature, single stage, centrifugal impeller and magnetic drive.  
The range of TMB pumps includes five models to deliver flows from 15 to 70 l/min.

### EXCEPTIONAL CORROSION RESISTANCE

It is made entirely of thermoplastics with outstanding chemical and mechanical resistance namely glassfibre reinforced polypropylene (GFR/PP). Ceramics for the spindle, reinforced PTFE for the bearings and FKM for the OR gasket, are the materials used for the pieces in contact with the liquids pumped.

### PRINCIPLE OF OPERATION:

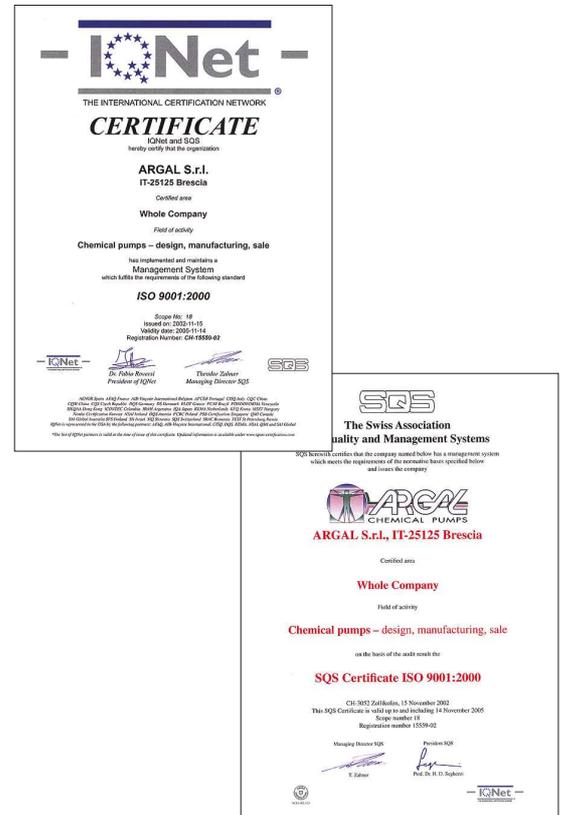
The drive magnet, outside the casing and keyed on the spindle, drives the magnetic impeller inside the hermetic casing. In this way, the traditional shaft seal and the consequent leakage problems are eliminated. So there is no corrosion of the outer parts (motor and bearings) in the environment.

Compact dimension, low noise, absence of seal device make these pumps ideal for application in any place or plant and can be incorporated into sophisticated equipment or "clean" environment.

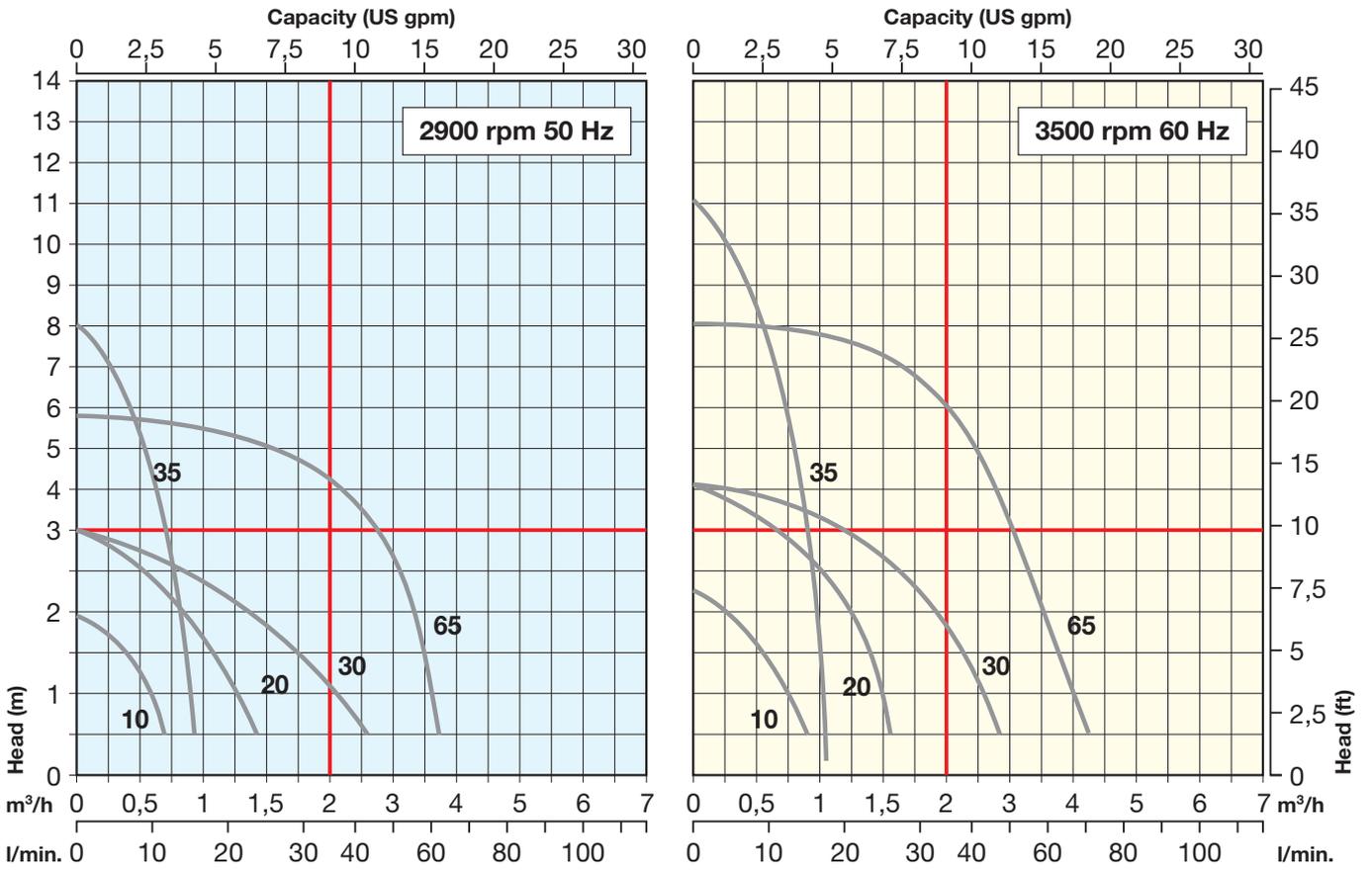
### CONSTRUCTION

- The drive magnet assembly hauls ferrite magnets, revolves outside the rear casing and drives the impeller magnetically.
- The volute casing is a monolithic injection moulded part made of glass reinforced polypropylene with encapsulated front spindle bearing; the connections can be either hosed or screwed.
- The rear casing is made by the same process and the thermoplastic material of the front casing and hosts the rear spindle's bearing.
- The coupled volute casing and rear casing realise the leakage proof casing of the pump.
- The polypropylene impeller features built in ceramic spindle and ferrite magnets.

TMB models	10	20 - 30 - 35 - 65
Execution	WR	WR
Internal structure	N <sub>1</sub>	N <sub>1</sub>
Volute casing	GFR - PP	GFR - PP
Rear casing		
Centrifugal impeller		
Guide bushing	-	GFR/PTFE
Spindle	CER	CER
Thrust bush	GFR/PTFE	CER
OR gasket	FKM	FKM
Screws	Stainless steel	Stainless steel



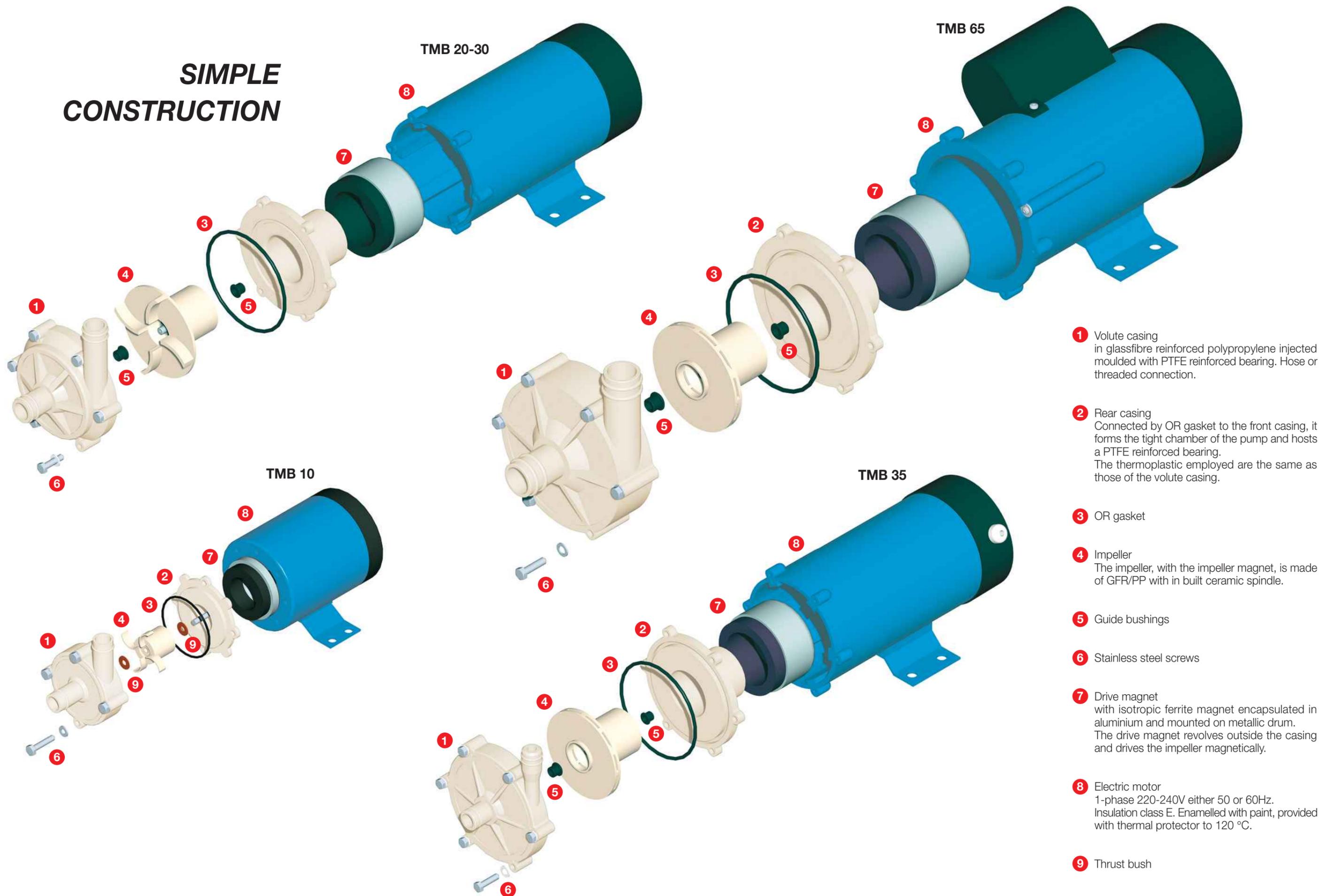
**GENERAL PERFORMANCE CURVE**



Curves referred to: water et 20 °C - viscosity 1 °E



## SIMPLE CONSTRUCTION



**1** Volute casing in glassfibre reinforced polypropylene injected moulded with PTFE reinforced bearing. Hose or threaded connection.

**2** Rear casing  
Connected by OR gasket to the front casing, it forms the tight chamber of the pump and hosts a PTFE reinforced bearing. The thermoplastic employed are the same as those of the volute casing.

**3** OR gasket

**4** Impeller  
The impeller, with the impeller magnet, is made of GFR/PP with in built ceramic spindle.

**5** Guide bushings

**6** Stainless steel screws

**7** Drive magnet with isotropic ferrite magnet encapsulated in aluminium and mounted on metallic drum. The drive magnet revolves outside the casing and drives the impeller magnetically.

**8** Electric motor  
1-phase 220-240V either 50 or 60Hz. Insulation class E. Enamelled with paint, provided with thermal protector to 120 °C.

**9** Thrust bush

## SPECIFICATIONS

TMB				10	20	30	35	65
Connections	Thread	Ø inlet	BSP / NPT	-	3/4"	3/4"	1/2"	1"
		Ø outlet	BSP / NPT	-	3/4"	3/4"	3/8"	1"
	Hose	Ø inlet	mm	14	18	20	18	26
		Ø outlet	mm	14	17	20	18	26
Motor	Power IN (50 / 60Hz)	W	25 / 21	29 / 39	57 / 73	57 / 73	97 / 134	
	Power OUT (50 / 60Hz)		8 / 7	15 / 21	30 / 43	30 / 43	63 / 87	
	Phases	No.	1					
	Std voltage	V	AC 220~240 - 50/60Hz					
	Current (50 / 60Hz)	A	0,12 / 0,10	0,13 / 0,18	0,24 / 0,36	0,24 / 0,35	0,45 / 0,63	
	Speed (50 / 60Hz)	r.p.m.	2700 / 3200	2800 / 3200	2700 / 3100	2700 / 3100	2800 / 3300	
Pump	Max head (50 / 60Hz)	M	1,8 / 2,2	3,0 / 4,0	3,4 / 4,5	8,0 / 11,0	6,0 / 8,2	
	Max capacity (50 / 60Hz)	L/min	12 / 14	21 / 25	41 / 45	16 / 18	62 / 70	
	Weight	Kg	0,9	2,2	3	3	5	

TMB	10U	20U *	30U *	35U *	65U *
* Compliant to UL regulation	AC 120V - 60 Hz				

## OPERATING LIMITS

- The admitted temperature of the liquid pumped is from 0 to 60 °C.
- The max viscosity up to 20 cPt.
- The specific weight not above 1,1 Kg/dm<sup>3</sup> (at the max flow).
- The environmental temperature between 0 and 45 °C.

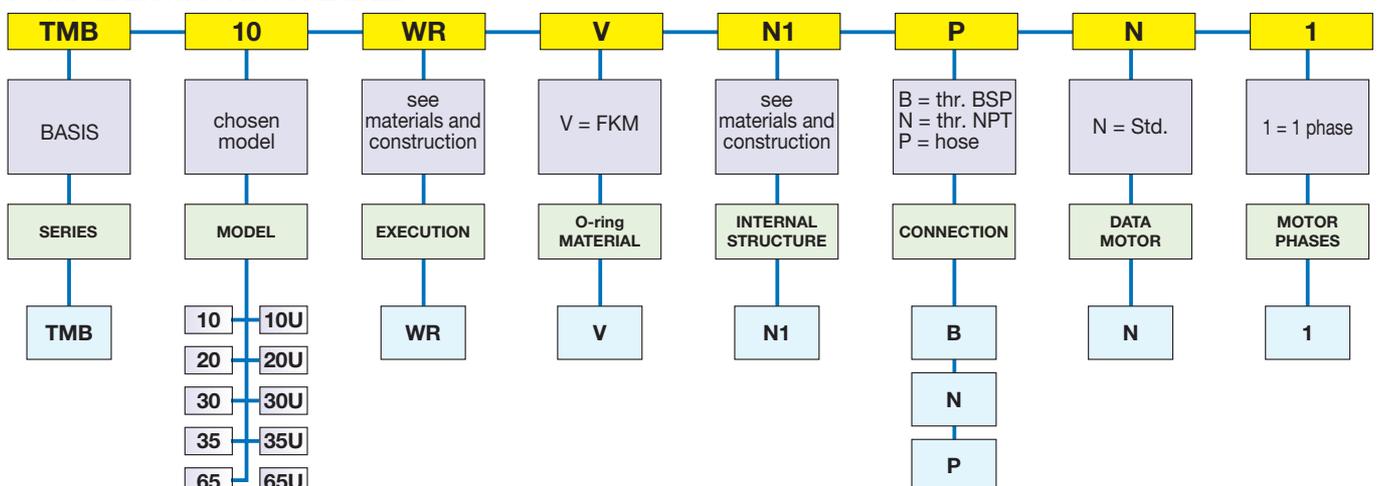
## WARNINGS

- TMB pumps do not run dry and have to be flooded.
- Pumping dirty liquid or liquid containing abrasive solids in suspension may reduce the operating life and/or impair the performances of these pumps.

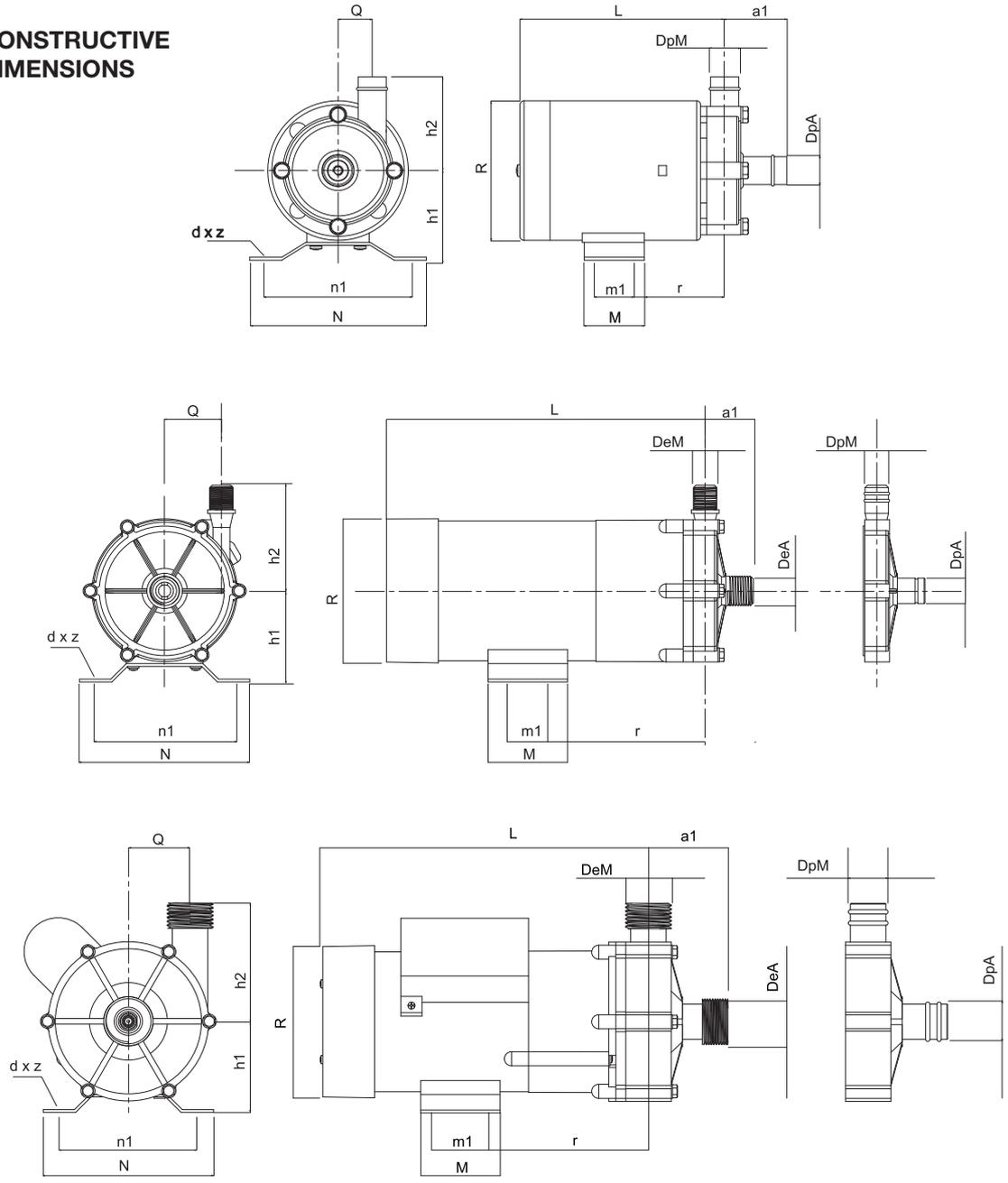
## MAIN APPLICATIONS

Water treatment	Storage batteries manufacturer	Refrigerator
Aquariums (water games)	Electroplating	Ice making machines
Graphic art machinery	Silver recovery	Beverage vending machine
Cosmetic industry	Metalwork machinery	Corrosive chemical solutions
Dyeing equipment	Descaling	Toxic liquid
Etching equipment	Fungicide and pesticide	Sea Water
Medical equipment	Solar systems	Pure water (demineralised water)
Photographic developing process	Laser systems	Chemicals to preserve food
Chemical laboratories	Boats mounted refrigerator	Laundry

## PUMP IDENTIFICATION LABEL

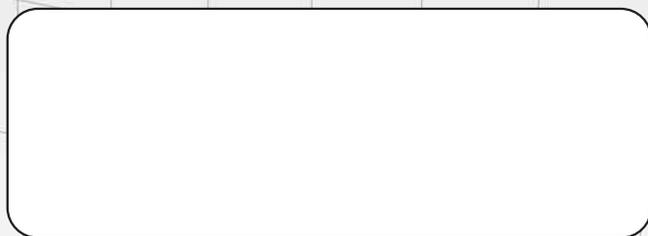


**CONSTRUCTIVE DIMENSIONS**



**SPECIFICATIONS**

TMB	10	20	30	35	65
a1	31	37	48	34	62
h1	45	55	60	60	67
h2	47	74	75	75	84
L	100	181	206	206	222
m1	16	30	40	40	40
M	30	50	64	64	68
n1	78	70	100	100	120
N	90	92	120	120	144
Q	17	30	32	40	45
r	46,5	75	94	94	115
R	71	90	90	90	115
d x z	Ø 5x4	Ø 6x4	Ø 8x4	Ø 8x4	Ø 8x4
DeA	-	3/4"	3/4"	1/2"	1"
DeM	-	3/4"	3/4"	3/8"	1"
DpA	14	18	20	18	26
DpM	14	17	20	18	26



Member of AIB  
associazione  
industriale  
bresciana

IT - 25125 BRESCIA - Via Labirinto, 159  
Tel. +39 030 3507011 - Fax +39 030 3507077  
Export dpt. Tel. +39 030 3507033  
Web: [www.argal.it](http://www.argal.it) - E-mail: [export@argal.it](mailto:export@argal.it)

It is the policy of ARGAL to always improve its products and the right is reserved to alter specifications at any time without prior notice.  
No part of this publication may be reproduced in any form or any means.