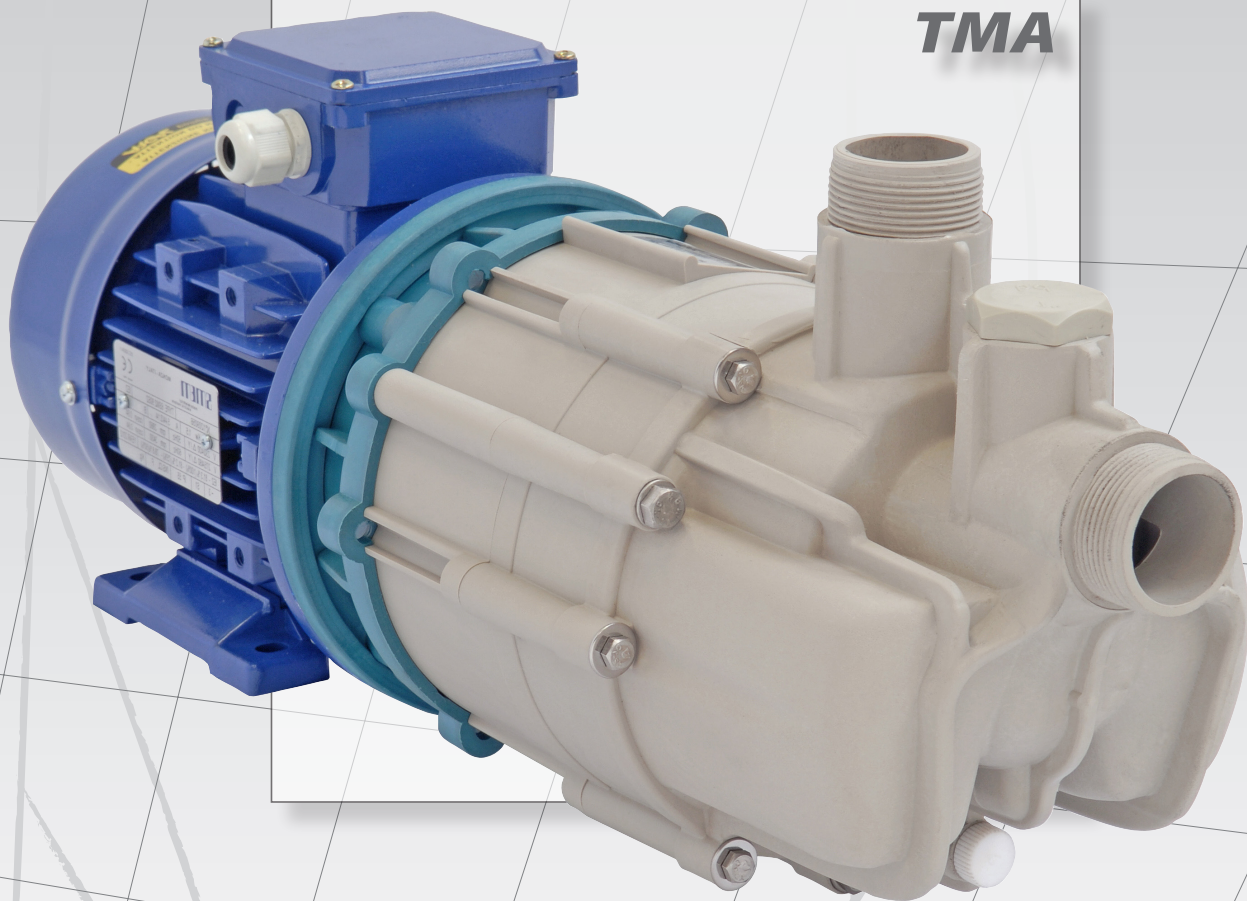


ARGAL

CHEMICAL PUMPS

Alifter range



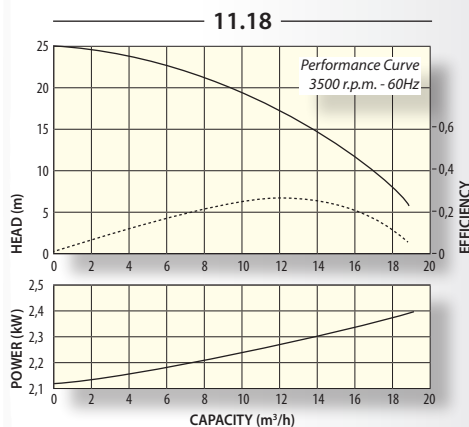
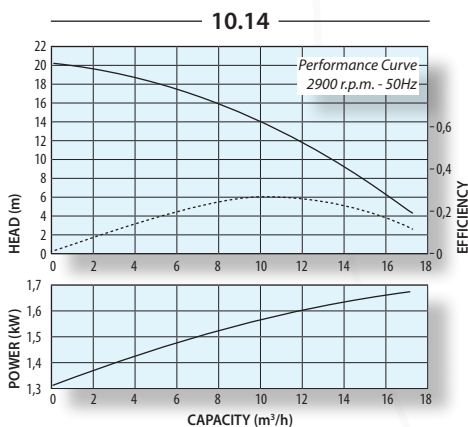
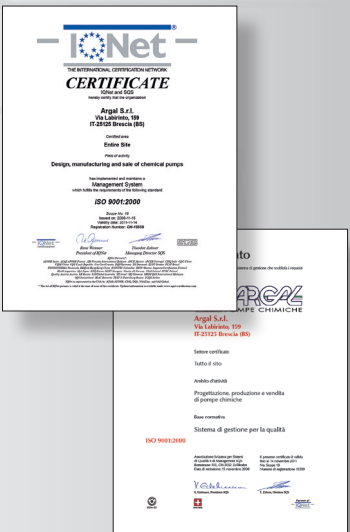
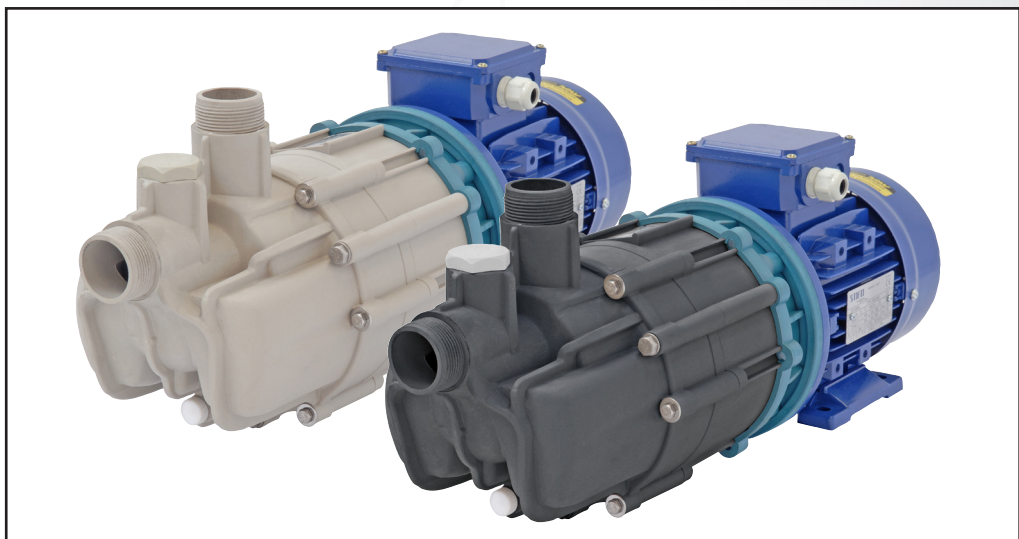
TMA

***Self-priming magnetical driven pump
in thermoplastic materials***

ALIFTER - TMA G2

It is an innovative pump designed by the R&D department of Argal with a pending international patent. It is a magnetic drive, self-priming, biphasic turbo radial pump and is manufactured either in polyolefin thermoplastic polymer (PP) or fluorinated (E-CTFE).. Thanks to its construction the TMA pump develops higher suction head and shorter priming timethan self priming centrifugal pumps;

its biphasic impeller primes fluids with high density, viscosity and vapour such as sulphuric 98%, hydrochloric 33%, nitric, phosphoric acid, sodium hypochlorite, caustic soda, ferric chlorite provided the negative suction head is up to 4 metres. The high torque magnetic joint and the option to adopt electric motors of increasing rated power allows this device to pump a broad range of chemical liquids of variable specific weight without compromising its typical hydraulic performances.



MAIN FEATURE

- Choice of material chemically resistant to all corrosive liquid.
- Ability to prime from an empty suction duct.
- Fast priming
- Magnetic core embedded in the biphasic impeller
- Max. lift = -6 m
- Max. allowed specific weight up to 2 kg/dm³
- Minimum NPSHa = 3 m (abs)
- Standard motors IEC or NEMA.

THE MATERIALS

table 1

VERSION	REINFORCED POLYMERS	MIN. TEMP.	MAX TEMP.	ENVIRONMENT TEMP
WR	GFR/PP	-5°C (23°F)	60°C (140°F)	0÷40°C (14÷104°F)
GF	CFF/E-CTFE	-20°C (-4°F)	90°C (194°F)	-20÷40°C (-4÷104°F)

Note: Maximum inlet pressure: 1,5 bar

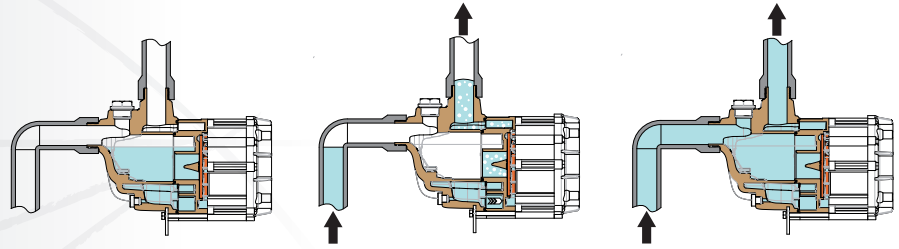
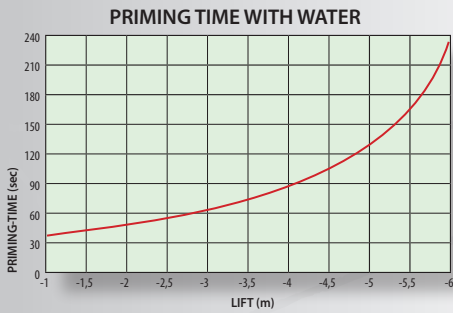
THE CONSTRUCTIONS

table 2

VERSION	WR			GF		
	R1	X1	N1	R2	X2	N2
Volute casing	GFR+PP			CFF+E-CTFE		
Rear casing						
Centrifugal impeller	CER			SiC		
Guide bushing						
Shaft	GFR+PTFE			GFR+PTFE		
Thrust bush	FKM (1)			FKM (1) (2)		
OR gasket	Stainless steel					
Screws	Stainless steel					

Upon request:(1)EPDM and (2) FFKM





Stopping phase: a small quantity of liquid is trapped into the pump to enable the next starting.

Priming phase: the impeller gives a specific circulation of air-liquid mixture moving air from the suction pipe to the discharge side in the atmosphere.

Pumping phase: after the air is totally removed from the suction side, the pipe is flooded by the liquid and the pumping phase can start.

ASSESS OF MAXIMUM LIFT

Vapour Pressure

$P_v [m_{H_2O}]$	0,25	0,75	1,25	2	2,5	3	4	5	
Lift	$H_s [m_{H_2O}]$	p.s. = max. value of specific weight of the fluid [Kg/dm ³]							
	-1	2	2	2	2	2	2	2	2
	-1,5	2	2	2	2	2	2	2	1,6
	-2	2	2	2	2	2	2	1,6	1,2
	-2,5	2	2	2	2	1,8	1,6	1,2	
	-3	2	2	2	1,7	1,5	1,3	1	
	-3,5	1,9	1,8	1,6	1,4	1,2	1,1		
	-4	1,7	1,5	1,4	1,2	1,1			
	-4,5	1,4	1,3	1,2	1				
	-5	1,3	1,2	1,1					
	-5,5	1,1	1,1	1					
	-6	1							

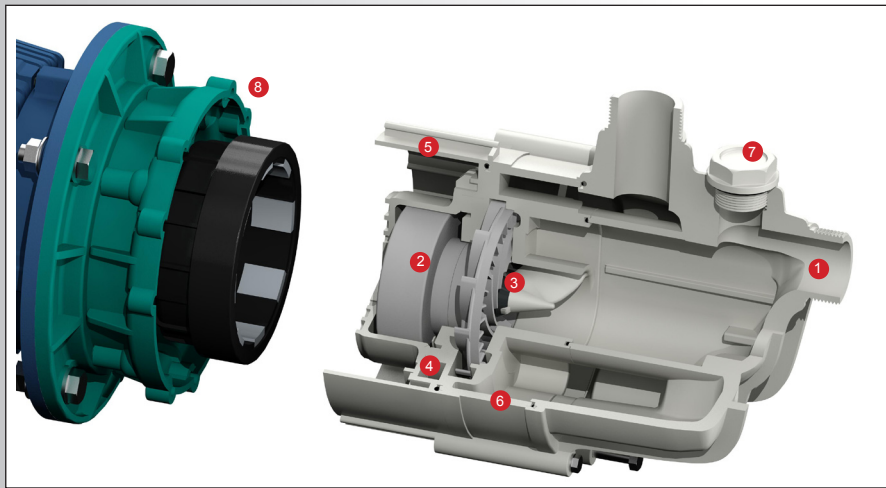
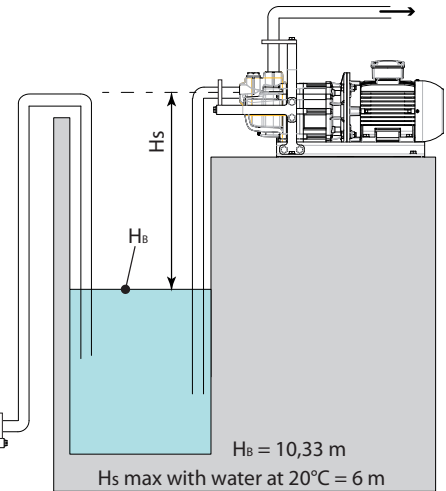
table 3

Medium	$P_v (^{\circ})$	p.s. (^{\circ})
HF - 50 ~ 40%	0,41	1,15
HCl - 37%	2	1,17
NaOCl	0,2	1,26
HNO₃ - 70%	0,65	1,41
NaOH - 50%	0,02	1,52
H ₂ SO ₄ - 98%	1x10 ⁻⁴	1,84

1 [m_{H₂O}] = 9806 [Pa]

(¹) ref. to 20°C - 68°F

(²) In table 3 select the P_v e p.s. value ≥ respect to the pumped fluid



- 1 Connections casing
- 2 Impeller
- 3 Thrust bushing
- 4 Central disk
- 5 Rear casing
- 6 Front volute casing
- 7 Filling plug
- 8 Motor parts interchangeable with TMR G2

PUMP IDENTIFICATION LABEL

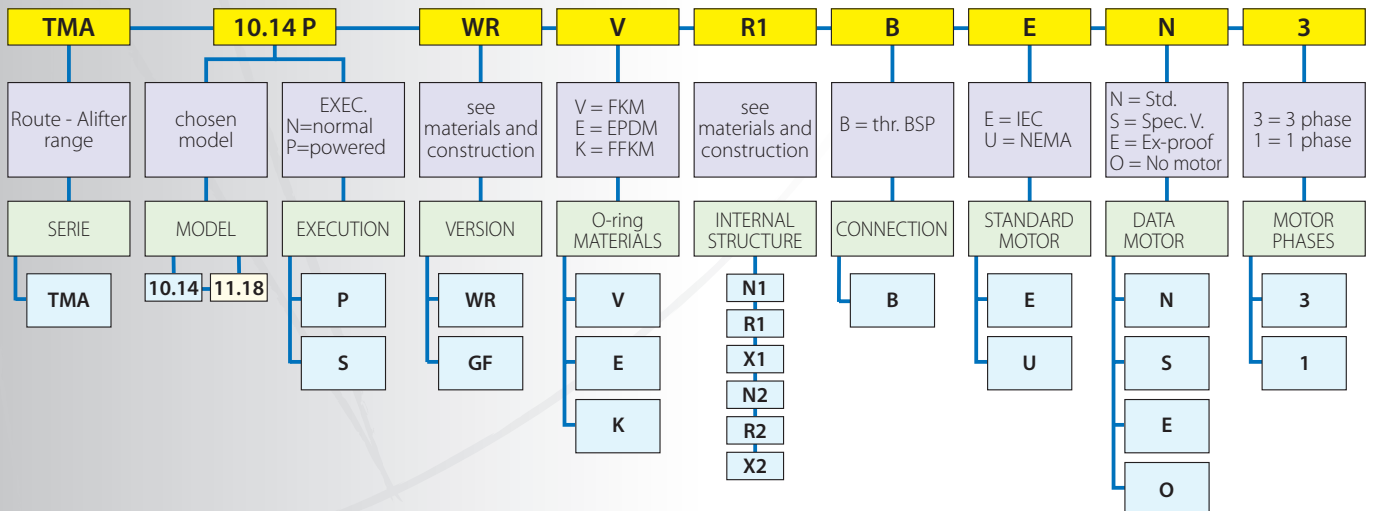


table 4

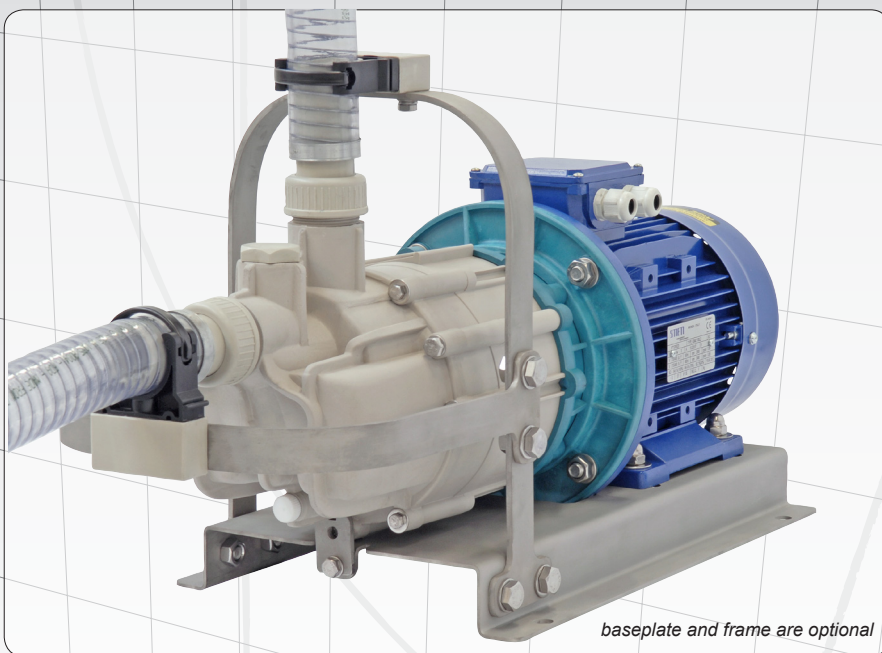
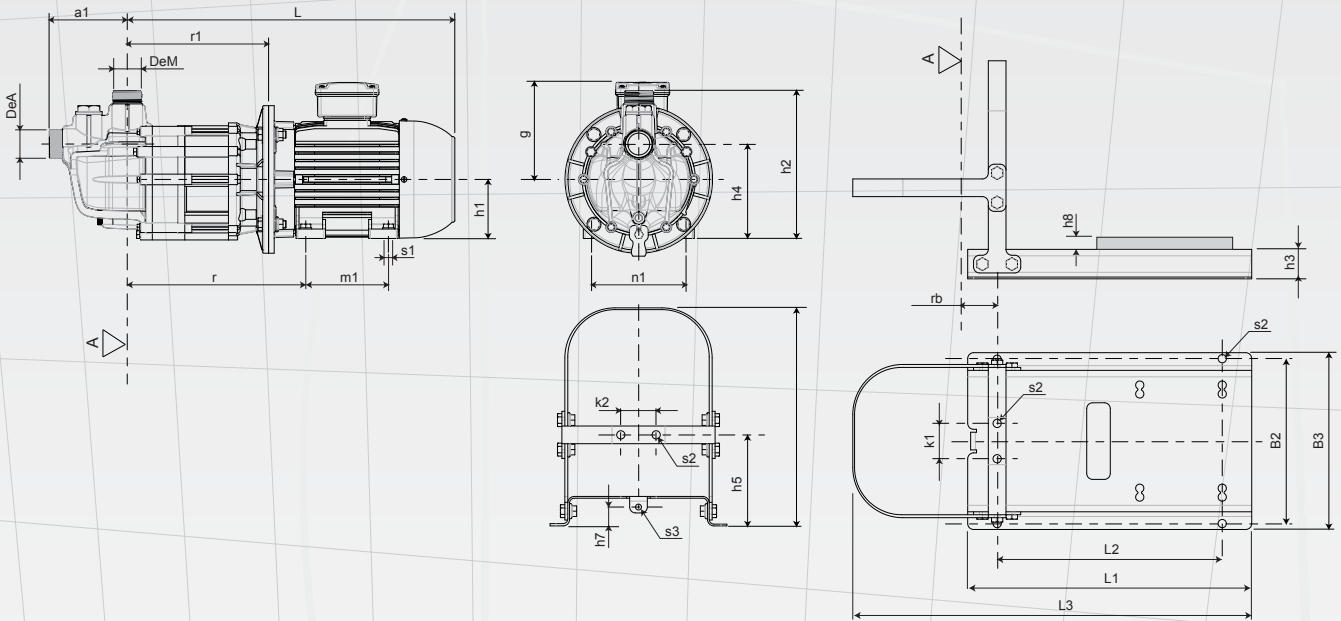
table 5

model		power [kW]	IEC frame	DeA	DeM	a1	h2	h4	L(°)	r	r1	g(°)	h1	m1	n1	s1
10.14	P	2,2	90L	1 1/2"	1 1/2"	132	240	150	510	280,5	224,5	140	90	125	140	10
	S	3	100				250	160	570	302,5	239,5	150	100	140	160	12
11.18	P	3	100	1 1/2"	1 1/2"	132	250	160	570	302,5	239,5	150	100	140	160	12
	S	4	112				262	172	580	309,5		180	112		190	

- (°) can change for different motors builder

table 6

model		power [kW]	IEC frame	rb	B2	B3	L1	L2	L3	h3	h5	h6	h7	h8	k1	k2	s2	s3
10.14	P	2,2	90L	60,5	280	300	482	382	677	50	154,5	370	32	20	60	60	14	10
	S	3	100											10				
11.18	P	3	100	60,5	280	300	482	382	677	50	154,5	370	32	10	60	60	14	10
	S	4	112											0				



baseplate and frame are optional



ARGAL

IT - 25125 BRESCIA - Via Labirinto, 159
 Tel. 030 3507011 - Fax 030 3507077
 Web: www.argal.it - E-mail: info@argal.it



Member of AIB
 associazione
 industriale
 Bresciana