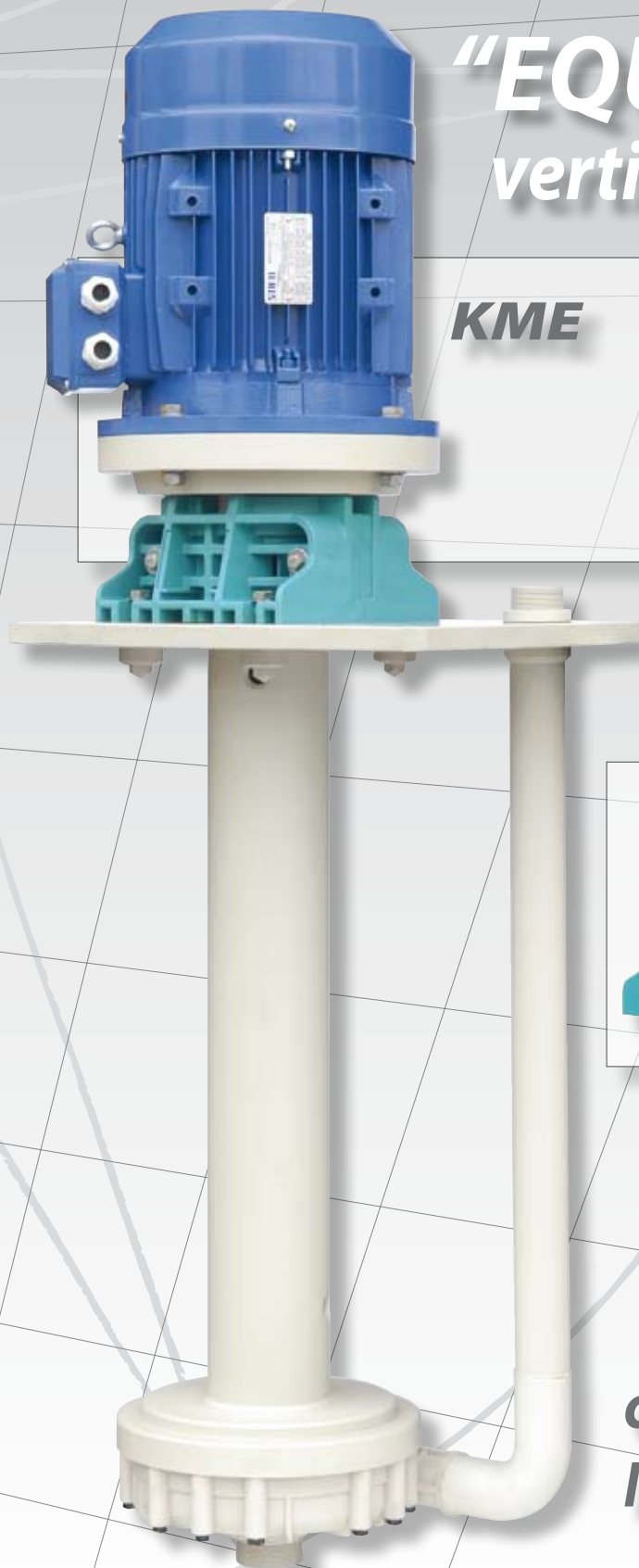


50Hz

ARGAL

CHEMICAL PUMPS

"EQUIPRO"
vertical pumps



KME



HME

*close-coupled
IEC motors*

Equipro

The pumps of this range (original Argal product) are made in thermoplastic technopolymers; they are close-coupled, vertical axis, with axial hydraulic suction connection, directed downward, and tangential outlet either free or connected to vertical outlet piping. They are specifically designed for pumping corrosive liquids, with particular constructive solutions to guarantee time-life and functionality.

There are no metal parts in direct contact with the pumped liquid; where the pump is connected with the motor there is no need of sealing system against leakage of liquids; only a device of vapour sealing in static and dynamic conditions is applied.

The innovative design of the base bracket, which is composed of two parts, allows wide access to the coupling joint of the standard electric motor in order to ease maintenance operations.

For each pump model, three different electric motor powers can be installed for pumping liquids with different specific gravities (N-P-S version, respectively for specific gravities from 1.1 to 1.35 - 1.8), even at maximum flow.

They differ in two series denominated KME and HME.

KME, with varying lengths from 600 to 1500mm of the immersed parts; they are pumps with the shaft guided by a sliding bearing, hosted at the backside of the impeller and formed by fixed and rotating bushings in appropriate chemical-resistant, wear-resistant and anti-abrasive materials.

HME, having fixed lengths of 275 or 450mm, are designed with a cantilevered shaft, with no lower guide and permits use in applications with fluids with the presence of crystalline particles and with the ability of running dry without failure.



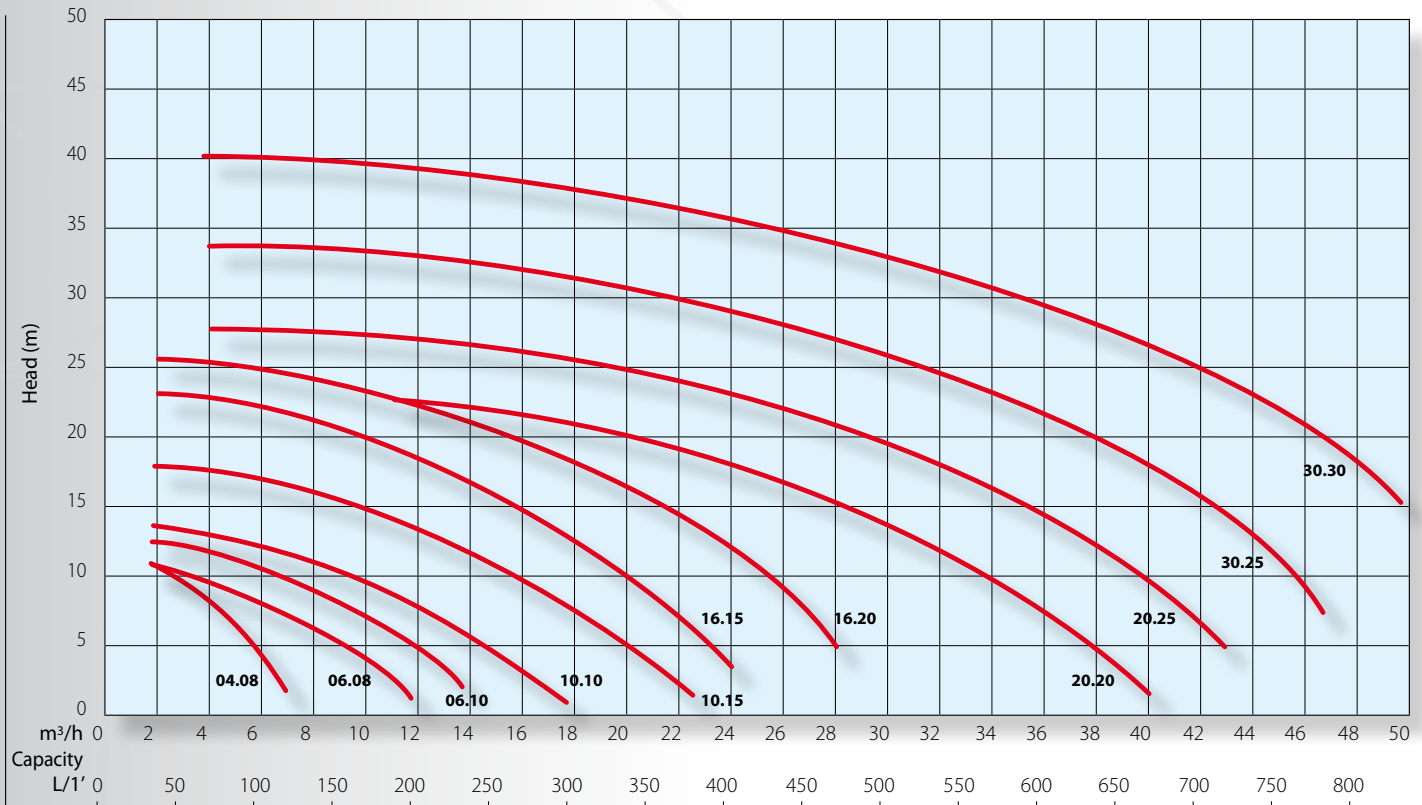
Argal operates with ISO 9001:2000 Quality System certified by SQS-IQNet.



HME serie, cantilevered

KME serie

General Performance Curve 2900 r.p.m. - 50Hz



NOTES: All curves are referred to: water at 20°C - viscosity 1 °E - specific gravity 1 kg/dm³ pt

LABELS IN THIS CATALOG	
GFR/PP	Glass fibre reinforced Polypropylene
CFF / PVDF	Vinylidene Polyfluoride carbon fibre filled
PP	Polypropylene
PVDF	Vinylidene Polyfluoride
E-CTFE	Etylene-Chloro Trifluoro Ethylene
PTFE	Polytetrafluoroethylene
Al₂O₃	Alumina ceramic at 99,7%
SiC	Silicon Carbide
FKM	Fluorine elastomer
EPDM	Ethylene-Propylene rubber

THE CONSTRUCTIONS

table 1

VERSION	WR	FC
Volute casing	GFR/PP	CFF/PVDF
Impeller		E-CTFE
Support		GFR/PP
Baseplate		PP
Shaft	Steel	
Shaft coating	PP	PTFE
Submerged column		PVDF
Gasket	FKM/EPDM	
Submerged screws	PVDF	
Screws	Stainless steel	

TECHNICAL DATA

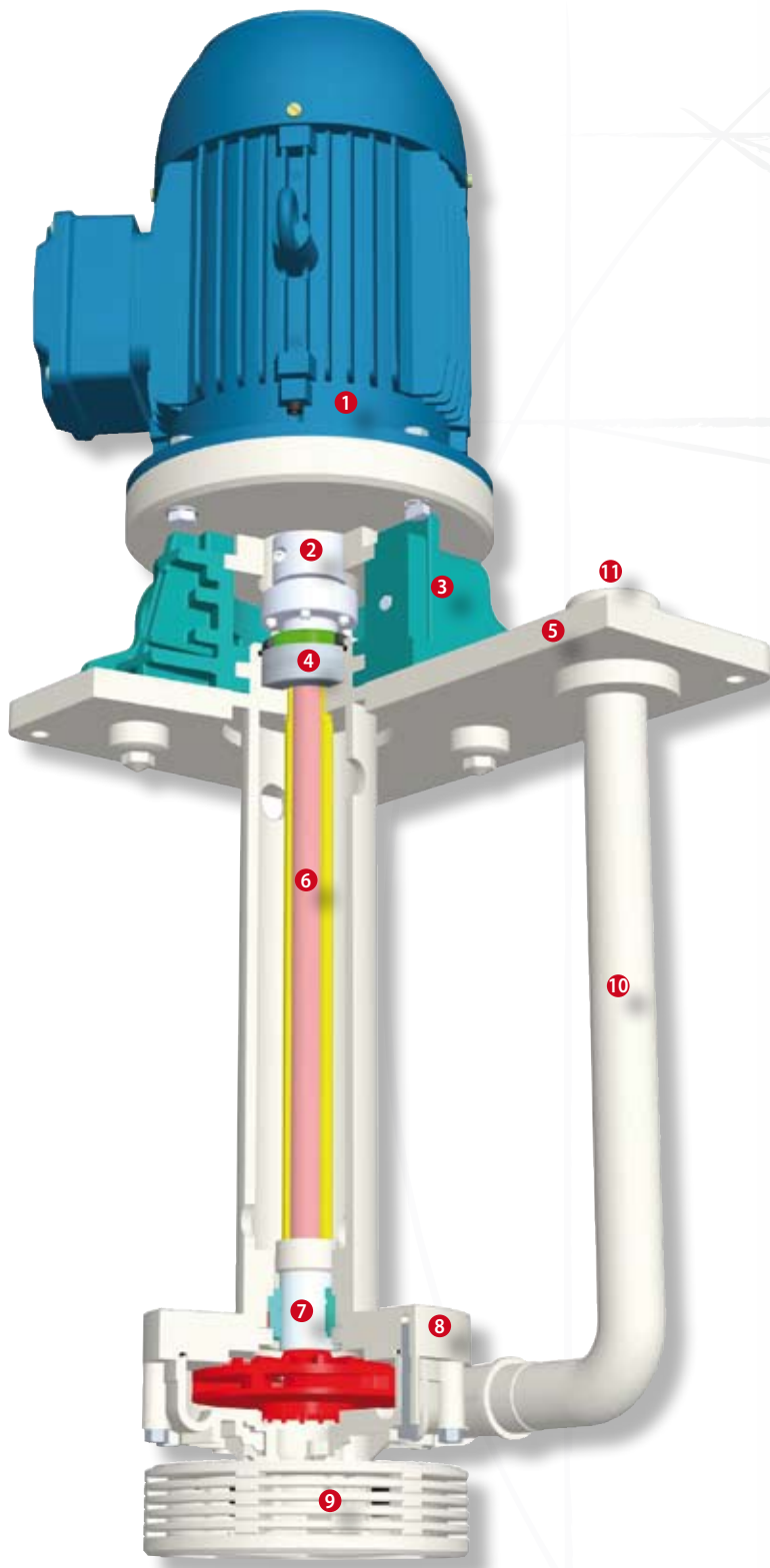
table 2

	MAX WORK TEMPERATURE °C						
	HME			KME			
Under plate lenght (mm)	275	450	600	800	1000	1250	1500
Version / Serie	HME			KME			
WR	70			65	55	50	
FC	90			85	75	65	
	ADMITTED ENVIRONMENTAL TEMPERATURE RANGE °C						
	0 ÷ +40						
FC	-10 ÷ +40					0 ÷ +40	

MOTOR SPECIFICATIONS

table 3

		04.08		06.08		06.10		10.10		10.15		16.15		16.20		20.20		20.25		30.25		30.30																
		N	P	S	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S													
Power	kW	/	0.37	0.55	0.37	0.55	0.75	0.55	0.75	1.1	0.75	1.1	1.5	1.1	1.5	2.2	1.5	2.2	3	2.2	3	4	3	4	3	4	5.5	4	5.5	7.5	5.5	7.5	5.5	7.5	/	7.5	/	/
Motor size	IEC	/	71A	71B	71A	71B	80A	71B	80A	80B	80A	80B	90S	80B	90S	90L	90S	90L	100	90L	100	112	100	112	132SA	112	132SA	132SB	132SA	132SB								
Phase	n°	3phase (all models) - 1phase (<3 kW)																																				
Std. voltage	V	400 ± 5% 50 Hz - 220 ± 5% 50 Hz																																				
Motor protection	IP	55																																				



KME - Constructed for fixed installations with the pump body immersed in basins, tanks, collecting wells, reservoirs. Fluids with a specific gravity of 2 kg/dm³ can be handled in function of installed power, with a kinematic viscosity max. of 75 cSt and temperatures as detailed in the table 2

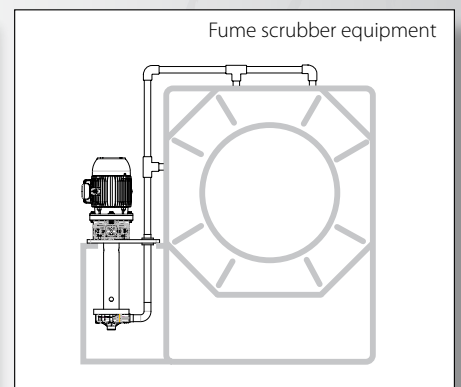
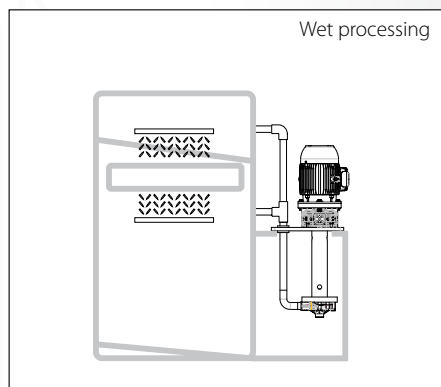
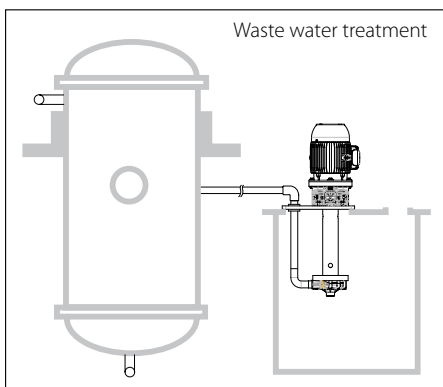
STANDARD PUMP LENGTHS (mm)

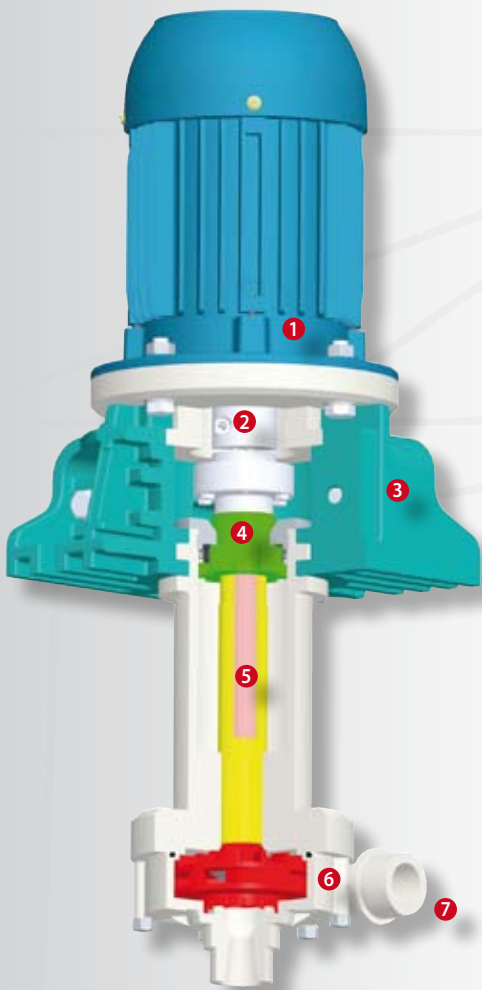
table 4

WR	600	800	1000	1250	1500
FC					

PRINCIPAL COMPONENTS

- 1 Electric motor with a standard IEC or NEMA flange.
- 2 Coupling joint of the motor with the pump shaft.
- 3 Base bracket in reinforced technopolymer, it "opens" into 2 pieces for easy access to the assembly/disassembly operations of the motor. It supports the pump and acts as a base for application in small spaces.
- 4 Vapour seal operating dry, both in static and dynamic conditions and active up to a backpressure of 60mbar.
- 5 Base plate in thermoplastic polymer.
- 6 Pump shaft in steel covered with a rigid thermoplastic sheath.
- 7 Sliding bearings with the following combinations of materials:
PTFE/glass on Ceramic Alumina for general use, also with crystalline and flake formations;
Silicon carbide on silicon carbide in the presence of significant percentages of solids and need of greater chemical resistance (compounds of fluorine, strong alkalis, etc.).
- 8 Pump casing and impeller. In direct contact with the fluid, they are made of materials with excellent chemical resistance. Versions WR and FC have the pump casing and impeller made of polymers respectively reinforced with glass fibers and carbon.
- 9 Suction filter is available on request and fixed to the inlet port with free passage of 3 mm.
- 10 Outlet pipe is connected to the volute casing up to the support plate and is provided with a blocking element.
- 11 Connections
 - WR version (polypropylene): BSP threaded and, upon request, NPT or ISO/ANSI flanged;
 - FC version (PVDF): ISO or ANSI flanged.





HME - Constructed for fixed installations, with the pump body submerged in basin, tanks, collecting wells, and for those with supports external to the container of the liquid. In this case, a secondary discharge pipe is required, between the pump and the container of liquid, set on the pump column. (Fig. A)

STANDARD PUMP LENGTHS (mm)

table 5

WR	275	450
FC		

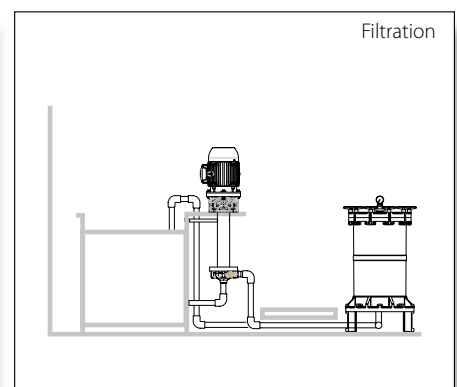
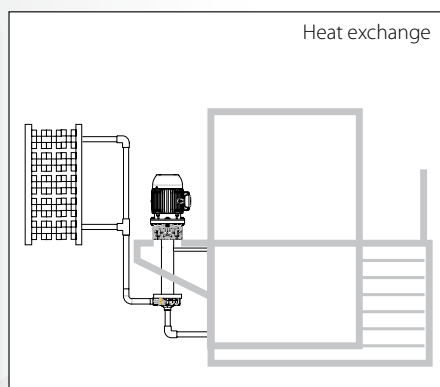
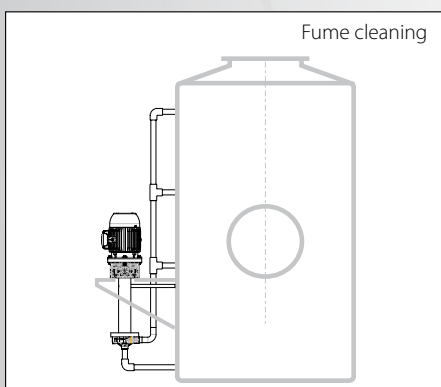
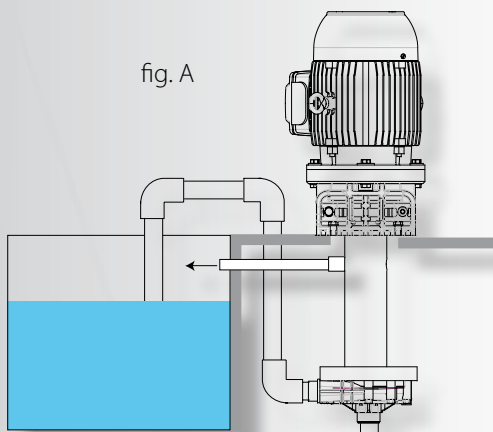
PRINCIPAL COMPONENTS

- 1 Electric motor with a standard IEC or NEMA flange.
- 2 Coupling joint of the motor with the pump shaft.
- 3 Base bracket in reinforced engineering polymer, it "opens" into 2 pieces for easy access to the assembly/disassembly of the motor to the pump. It supports the pump and serves as a base for application in small spaces.
- 4 Vapour sealing operating dry both in static and dynamic conditions and active up to a backpressure of 60mbar.
- 5 Pump shaft in steel covered with a rigid thermoplastic sheath.
- 6 Pump casing and impeller. With direct fluid contact, it contains materials with excellent chemical resistance. Versions WR and FC have the pump casing and impeller made of polymers respectively reinforced with glass fibers and carbon.
- 7 Connection (without outlet tube):
BSP threaded and, upon request, NPT or ISO/ANSI flanged;
Connection (with the outlet tube):
WR execution (polypropylene): BSP threaded and, upon request, NPT or ISO/ANSI flanged;
FC execution (PVDF): ISO or ANSI flanged.

Optionals:

- Suction filter fixed to the inlet port with free passage of 3 mm.
- Base plate in thermoplastic polymer
- Outlet pipe is connected to the volute casing up to the support plate and is provided with a blocking element.

fig. A



INNOVATION

CLOSE-COUPLE PUMP WITH ELECTRIC MOTOR APPLICABLE WITHOUT DISASSEMBLING THE PUMP COMPONENTS

1 Standardised electric motors (IEC, NEMA):

No motors with special shafts and flanges
Possibility of different voltages and protections
Applicability of explosion-proof classes (E-exd).

2 Argal-designed rigid coupling orthogonality ensured between the coupling flange and the pump shaft axis automatic centering of the 2 half-couplings easy opening/closing of the parts.

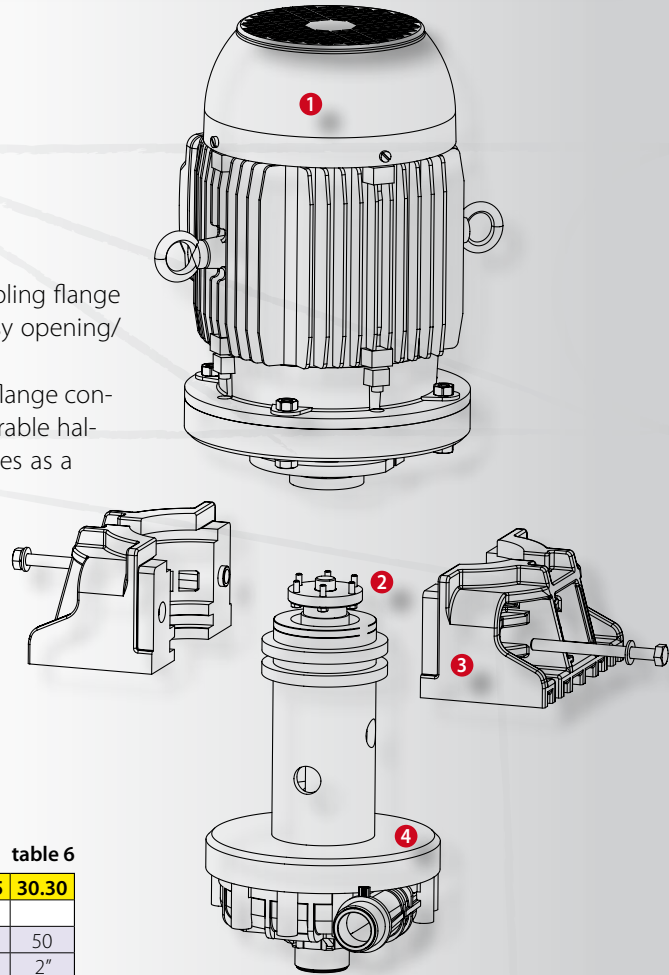
3 Base bracket conceived by Argal designed for simultaneously fixing the flange connected to the motor with the immersed pump body composed of 2 separable halves to allow the easy installation of the motor through the coupling serves as a base for applications in narrow spaces.

4 Injection-moulded pump body available in 2 materials.

WR – basis resin is PP (Polypropylene) with a wide spectrum of chemical resistance. Its reinforcement with glass fibres offers good mechanical strength and dimensional stability.

FC – basis resin is PVDF (Polyvinylidene fluoride), fluorinated polymer with good abrasion resistance and high mechanical strength.

The carbon fibres loading increases its dimensional values and stability without reducing chemical resistance.



CONNECTIONS

table 6

		04.08	06.08	06.10	10.10	10.15	16.15	16.20	20.20	20.25	30.25	30.30
DnA	Flange											
	ISO	25	32	32	40	40	40	40	50	50	50	50
DnM.1	ANSI	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"
	ISO	25	32	32	32	32	32	32	40	40	40	40
DnM.2	ANSI	1"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	ISO	20	20	25	25	25	32	32	40	40	40	40
DeA	ANSI	3/4"	3/4"	1"	1"	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	Thread											
DeM.1	BSP / NPT	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"
	BSP / NPT	1"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
DeM.2	BSP / NPT	3/4"	3/4"	1"	1"	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	BSP / NPT	3/4"	3/4"	1"	1"	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

PUMP IDENTIFICATION LABEL

table 7

KME		16.20 N		WR	V	1000	E	N	2,2	N	B
EQUIPRO RANGE	CHOSE MODEL	EXECUTION N=normal P=powered S=strong. pow.	SEE MATERIALS AND COSTRUCTION	V = FKM E = EPDM	UNDER PLATE LENGHT	E = IEC U = NEMA	N= std S=V. special E=Ex/Proof. O=No motor	MOTOR POWER	N=PTFE/Al ₂ O ₃ X=Sic/Sic	B = BSP N = NPT Z = ISO-ANSI-JIS	
SERIE	MODEL	EXECUTION	VERSION	O-ring MATERIAL	mm.	DATA MOTOR	MOTOR	kw	INTERNAL STRUCTURE	CONNECTIONS	
KME	04.08 06.08 06.10 10.10 10.15 16.15 16.20 20.20 20.25 30.25 30.30	N P S	WR FC	V E	600 800 1000 1250 1500	E U	N S E O	0,37 055 0,75 1,1 1,5 2,2 3 4 5,5 7,5	N X	B N Z	

PUMP IDENTIFICATION LABEL

table 8

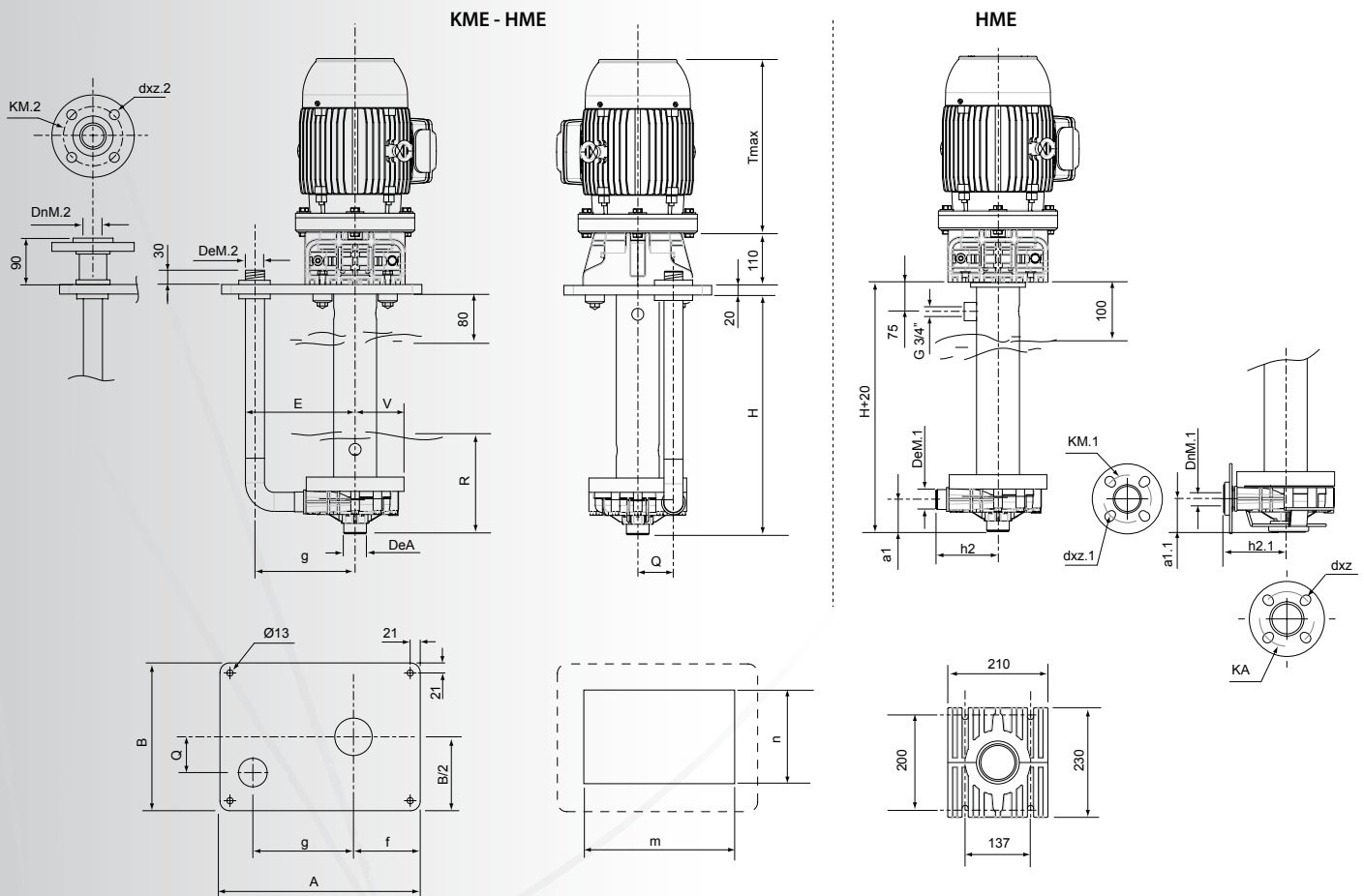
HME		10.10 P		WR	V	275	BC	E	N	1,1
EQUIPRO RANGE	CHOSE MODEL	EXECUTION N=normal P=powered S=strong. pow.	SEE MATERIALS AND COSTRUCTION	V = FKM E = EPDM	UNDER PLATE LENGHT	BC= BSP no plate NC= NPT no plate BP=BSP with plate NP=NPT with plate ZC=ISO-ANSI no plate ZP=SO-ANSI with plate	E = IEC U = NEMA	N= std S=V. special E=Ex/Proof. O=No motor	MOTOR POWER	
SERIE	MODEL	EXECUTION	VERSION	O-ring MATERIAL	mm.	CONNECTIONS	DATA MOTOR	MOTOR	kw	
HME	04.06 06.08 06.10 10.10 10.15 16.15 16.20 20.20 20.25 30.25 30.30	N P S	WR FC	V E	275 450	BC NP NC ZC BP ZP	E U	N S E O	0,37 055 0,75 1,1 1,5 2,2 3 4 5,5 7,5	

DIMENSIONS

table 9

modello	IEC	KA ISO - ANSI	dxz ISO - ANSI	KM.1 ISO - ANSI	dxz.1 ISO - ANSI	KM.2 ISO - ANSI	dxz.2 ISO - ANSI	a1	a1.1	h2	h2.1	Q	V	E	R min	H	A	B	f	g	m	n	T max (*)				
04.08	N /	85	14x4	85	14x4	75 - 70	14x4 - 16x4	62	70	100	108	50	73	190	130	HME 275 - 450 KME 600 - 800 - 1000 - 1250 - 1500	400	310	140	170	340	250	/				
	P 71A	79	16x4	79	16x4																		235				
	S 71B	79	16x4	79	16x4																		235				
06.08	N 71A	100	18x4	100	18x4	85 - 79	14x4 - 16x4	67	67	130	130	75	103	222	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	190	390	280	255				
	S 80A																						89	16x4	89	16x4	235
06.10	N 71B	110	18x4	100	18x4	85 - 79	14x4 - 16x4	67	67	130	130	75	103	222	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	190	390	280	255				
	P 80A																						89	16x4	89	16x4	235
10.10	N 80A	110	18x4	100	18x4	85 - 79	14x4 - 16x4	67	67	130	130	75	103	222	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	190	390	280	255				
	P 80B																						98	16x4	98	16x4	300
	S 90S																						98	16x4	98	16x4	300
10.15	N 80B	125	18x4	110	18x4	110	18x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	300				
	P 90S																						98	16x4	98	16x4	330
	S 90L																						98	16x4	98	16x4	330
16.15	N 90S	121	19x4	98	16x4	98	16x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	300				
	P 90L																						98	16x4	98	16x4	330
	S 100																						98	16x4	98	16x4	350
16.20	N 90L	121	19x4	98	16x4	98	16x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	350				
	P 100																						98	16x4	98	16x4	360
	S 112																						98	16x4	98	16x4	360
20.20	N 100	125	18x4	110	18x4	110	18x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	350				
	P 112																						98	16x4	98	16x4	360
	S 132SA																						98	16x4	98	16x4	360
20.25	N 112	125	18x4	110	18x4	110	18x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	410				
	P 132SA																						98	16x4	98	16x4	410
	S 132SB																						98	16x4	98	16x4	410
30.25	N 132SA	121	19x4	98	16x4	98	16x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	410				
	P 132SB																						98	16x4	98	16x4	410
	S /																						98	16x4	98	16x4	410
30.30	N 132SB	121	19x4	98	16x4	98	16x4	70	70	160	160	96	135	252	250	HME 450 KME 600 - 800 - 1000 - 1250 - 1500	460	340	165	220	390	280	410				
	P /																						98	16x4	98	16x4	410
	S /																						98	16x4	98	16x4	410

(*) can change for motors of different brands





Member of AIB
associazione
industriale
Bresciana

Via Labirinto, 159 - 25125 BRESCIA - ITALY
Tel. +39.030.3507011 - Fax +39.030.3507077 - Export dpt. Tel. +39.030.3507033
Web: www.argal.it - E-mail: 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.*