

## Stainless Steel Centrifugal Pumps

### AL-RED -4

Pump Body: **Stainless Steel AISI 304**  
Impeller: **Stainless Steel AISI 304**  
Shaft: **Stainless Steel AISI 431**

### AL-RED -6

Pump Body: **Stainless Steel AISI 316L**  
Impeller: **Stainless Steel AISI 316L**  
Shaft: **Stainless Steel AISI 316L**

-  Clean Water
-  Residential
-  Agricultural
-  Industrial



### PERFORMANCE RANGE

- Maximum Flow Rate **73 GPM** (280 l/min) (16.8 m<sup>3</sup>/h)
- Maximum Head **196 feet** (60 m)

### APPLICATION LIMITS

- Maximum Suction Lift up to **22 feet** (7 m)
- Liquid Temperature between **14°F** (-10°C) and **194°F** (+90°C)
- Ambient temperature up to **104°F** (+40°C)
- Maximum Working Pressure:
  - **87 psi** (6 bar) for AL-RED 600-610-620
  - **116 psi** (8 bar) for AL-RED 650-660-670-650M-660M-670M  
AL-RED 650L-660L-670L
- Continuous Duty Rating **S1**

### CONSTRUCTION AND SAFETY STANDARDS

EN 60335-1  
IEC 60335-1  
CEI 61-150

EN 60034-1  
IEC 60034-1  
CEI 2-3



### CERTIFICATIONS

Company with management system certified DNV  
ISO 9001: QUALITY

### INSTALLATION AND USE

Suitable for use with clean water and with liquids that are not chemically aggressive towards the materials from which the pump is made. Because of its design features these centrifugal pumps are recommended for use in domestic, agricultural and industrial applications. All the components in contact with the pumped liquid are in stainless steel AISI 304 or AISI 316L thus guaranteeing complete hygiene and maximum resistance against corrosion. Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

### PATENTS - TRADE MARKS - MODELS

- AL-RED® Registered Trade Mark n. 0001575587

### OPTIONS AVAILABLE ON REQUEST

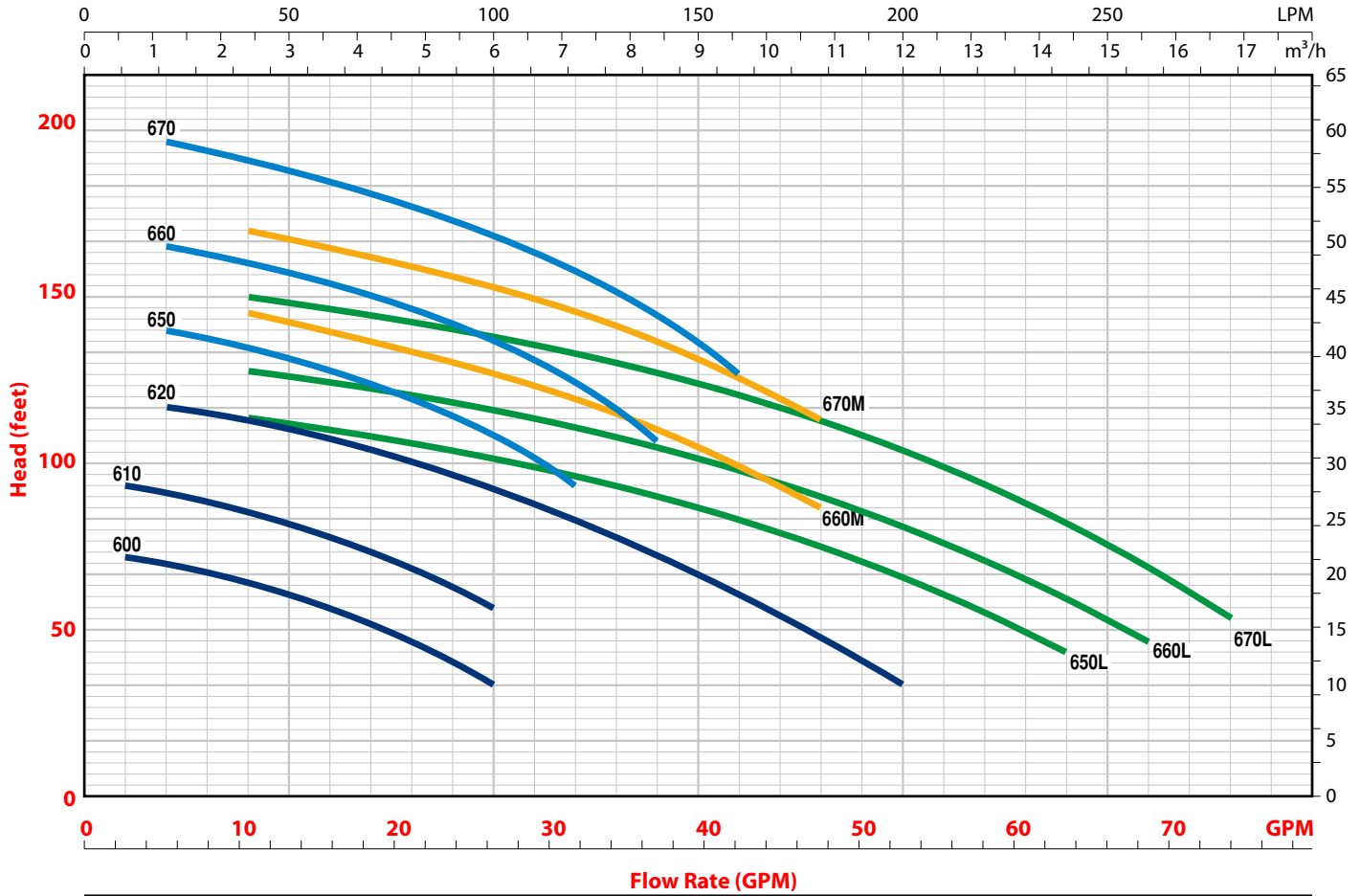
- Pump body with NPT ANSI B 1.20.1 threaded ports
- Special mechanical seal
- Other voltages
- IP X5 class protection for  
AL-RED 650-660-670-650M-660M-670M  
AL-RED 650L-660L-670L

### GUARANTEE

**2 YEARS** subject to terms and conditions

**PERFORMANCE CURVES AND DATA**

**60 Hz RPM = 3450**

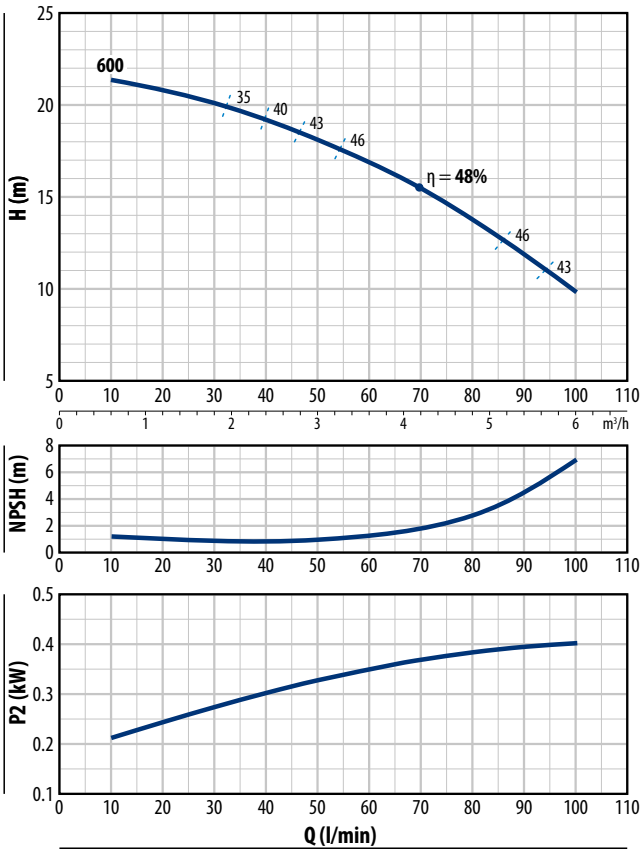


MODEL NUMBER		MOTOR SIZE			LPM	0	10	20	40	60	80	100	120	140	160	180	200	240	260	280			
Single-phase	Three-phase	kW	HP	EFF	GPM	0	2.6	5.3	10.6	15.8	21.1	26.4	31.7	36.9	42.3	47.5	52.8	63.4	68.7	73.9			
AL-REDm 600-4	AL-RED 600-4	0.37	0.50	IE3	HEAD (feet)	72.2	70.5	68.9	63.9	55.8	45.9	32.8											
AL-REDm 600-6	AL-RED 600-6																						
AL-REDm 610-4	AL-RED 610-4	0.60	0.85			93.5	91.8	90.2	83.7	75.4	67.2	55.8											
AL-REDm 610-6	AL-RED 610-6																						
AL-REDm 620-4	AL-RED 620-4	0.75	1.00			118	114	109	104	98.4	90.2	80.4	70.5	59.1	45.9	32.8							
AL-REDm 620-6	AL-RED 620-6																						
AL-REDm 650-4	AL-RED 650-4	1.10	1.50			143	138	133	126	118	107	91.8											
AL-REDm 650-6	AL-RED 650-6																						
AL-REDm 660-4	AL-RED 660-4	1.50	2.00			167	162	157	151	144	134	121	105										
AL-REDm 660-6	AL-RED 660-6																						
AL-REDm 670-4	AL-RED 670-4	2.20	3.00			197	193		187	180	174	166	154	141	125								
AL-REDm 670-6	AL-RED 670-6																						
AL-REDm 660M-4	AL-RED 660M-4	1.50	2.00	151			143	138	131	125	118	108	98.4	85.3									
AL-REDm 660M-6	AL-RED 660M-6																						
AL-REDm 670M-4	AL-RED 670M-4	2.20	3.00	174			167	161	157	151	143	134	123	111									
AL-REDm 670M-6	AL-RED 670M-6																						
AL-REDm 650L-4	AL-RED 650L-4	1.10	1.50	118			111	108	103	100	95.1	88.6	82	73.8	63.9	42.6							
AL-REDm 650L-6	AL-RED 650L-6																						
AL-REDm 660L-4	AL-RED 660L-4	1.50	2.00	131			126	123	118	115	108	103	96.8	88.6	80.4	59.1	45.9						
AL-REDm 660L-6	AL-RED 660L-6																						
AL-REDm 670L-4	AL-RED 670L-4	2.20	3.00	154			148	144	139	136	131	125	118	111	102	80.4	67.2	52.5					
AL-REDm 670L-6	AL-RED 670L-6																						

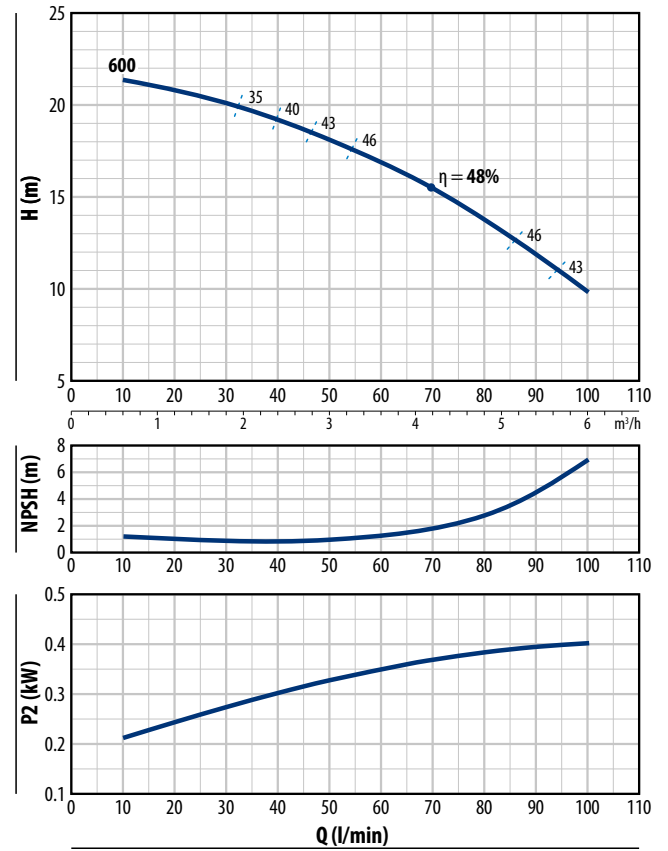
EFF = Three-phase motor efficiency class (IEC 60034-30-1)

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

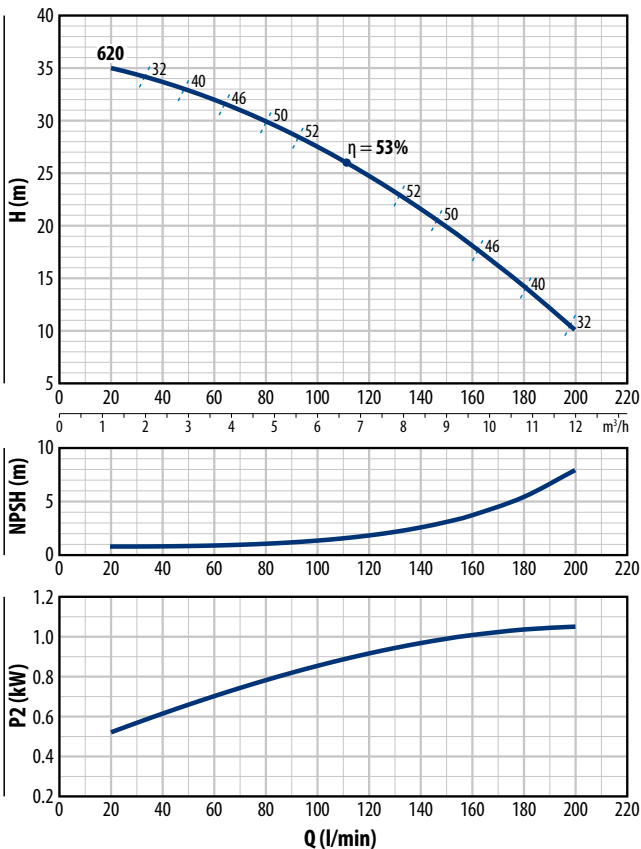
## AL RED 600



## AL RED 610



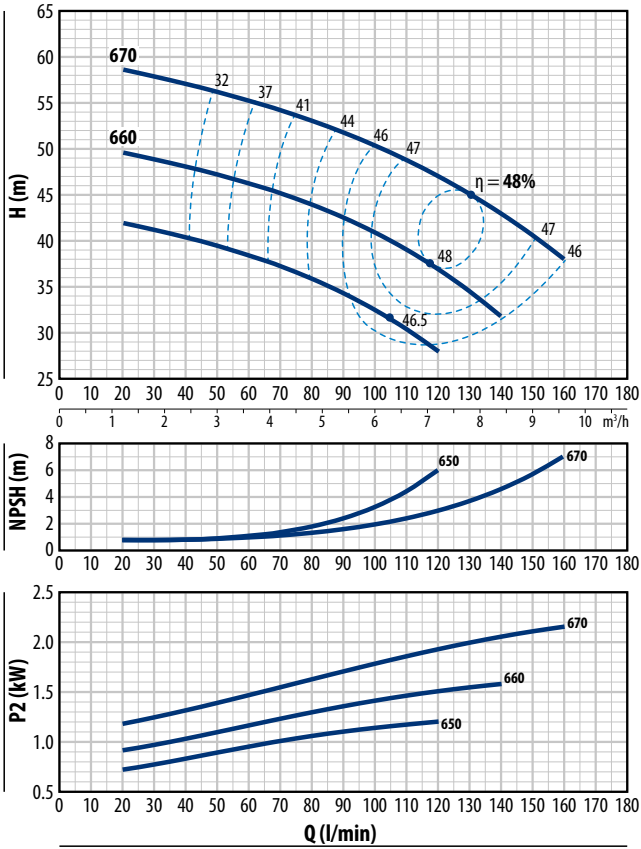
## AL RED 620



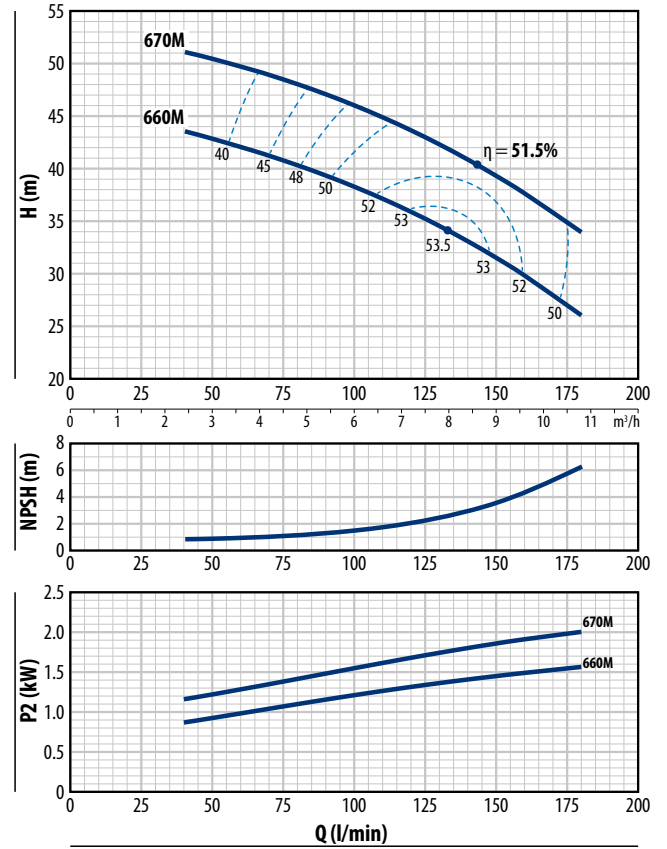
PERFORMANCE RANGE

60 Hz RPM = 3450

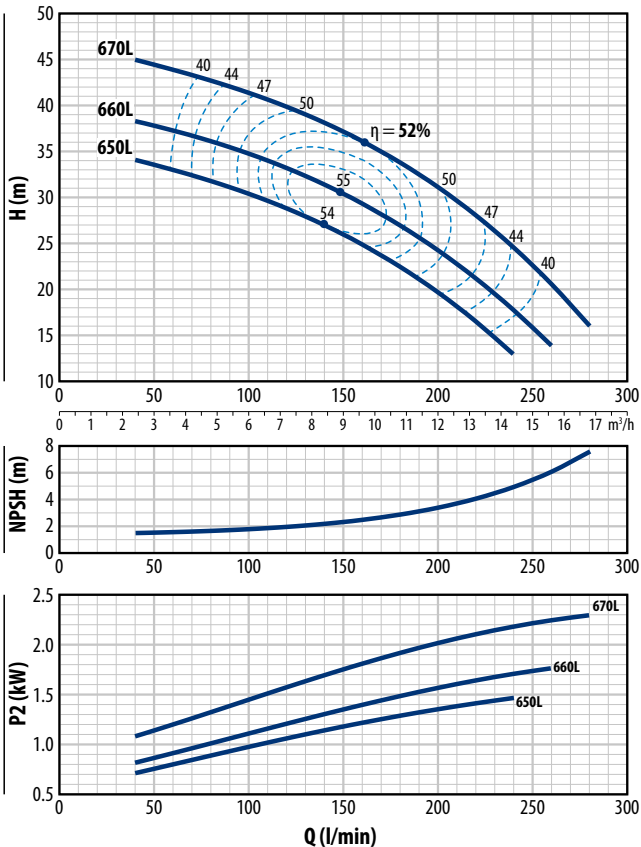
**AL RED 650-660-670**



**AL RED 660M-670M**

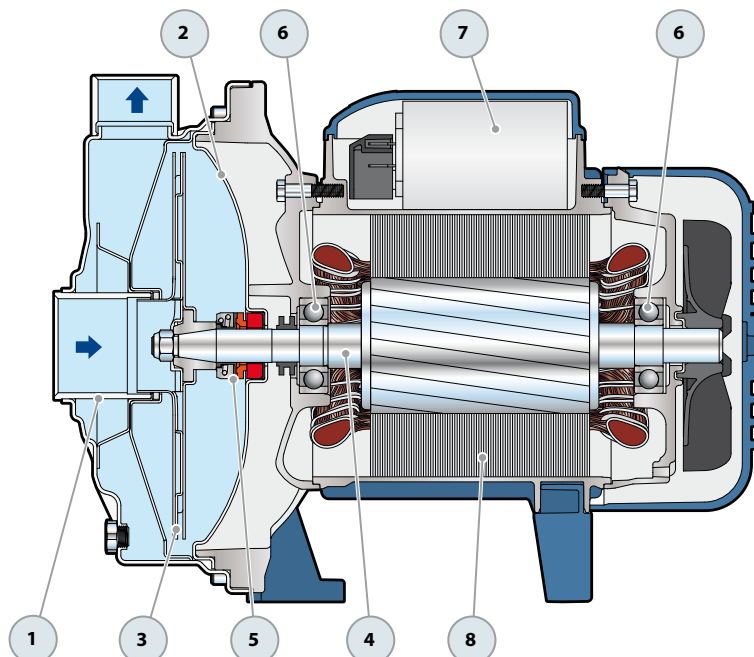


**AL RED 650L-660L-670L**

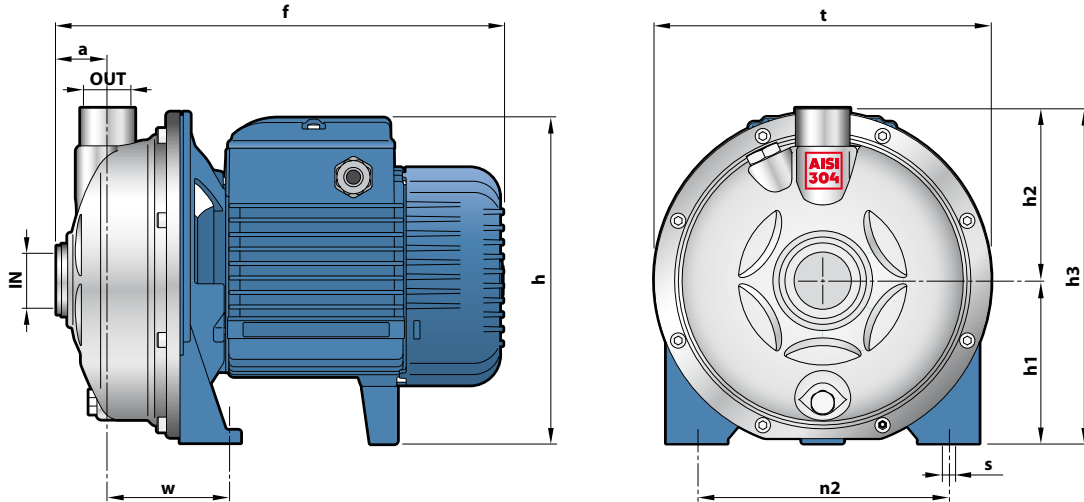


## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Stainless steel AISI 304 complete with threaded ports in compliance with ISO 228/1							
2	<b>BODY BACKPLATE</b>	Stainless steel AISI 304							
3	<b>IMPELLER</b>	Stainless steel AISI 304							
4	<b>MOTOR SHAFT</b>	Stainless steel AISI 431							
5	<b>MECHANICAL SEAL</b>	<i>Pump</i>	<i>Seal</i>	<i>Shaft</i>	<i>Materials</i>				
		<i>Model</i>	<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>	<i>Spring</i>	
		AL-RED 600 AL-RED 610	AR-12	Ø 0.4 in	Ceramic	Graphite	NBR	AISI 304	
		AL-RED 620	AR-14	Ø 0.5 in	Ceramic	Graphite	NBR	AISI 304	
		AL-RED 650 AL-RED 660 AL-RED 670	FN-18	Ø 0.7 in	Graphite	Ceramic	NBR	AISI 316	
		6	<b>BEARINGS</b>	<i>Pump</i>	<i>Model</i>				
		AL-RED 600 AL-RED 610	6201 ZZ / 6201 ZZ						
		AL-RED 620	6203 ZZ / 6203 ZZ						
		AL-RED 650 AL-RED 660 AL-RED 670	6204 ZZ / 6204 ZZ						
7	<b>CAPACITOR</b>	<i>Pump</i>	<i>Capacitance</i>						
		<i>Single-phase</i>	<i>(220 V)</i>		<i>(110 V or 127 V)</i>				
		AL-REDm 600	10	µF - 450 VL	25	µF - 250 VL			
		AL-REDm 610	14	µF - 450 VL	25	µF - 250 VL			
		AL-REDm 620	25	µF - 450 VL	60	µF - 300 VL			
		AL-REDm 650	25	µF - 450 VL	60	µF - 250 VL			
		AL-REDm 650L AL-REDm 660 AL-REDm 660M/L	31.5	µF - 450 VL	60	µF - 250 VL			
		AL-REDm 670 AL-REDm 670M/L	50	µF - 450 VL	80	µF - 250 VL			
		8	<b>ELECTRIC MOTOR</b>	AL-REDm -4: single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding. AL-RED -4: three-phase 220/380 V - 60 Hz or 220/440 V - 60 Hz. ⇒ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b> – Insulation: class F – Protection: IP X4					



## DIMENSIONS AND WEIGHT



MODEL NUMBER		PORTS		DIMENSIONS (inches)										Lbs		
Single-phase	Three-phase	IN	OUT	a	f	h	h1	h2	h3	n2	t	w	s	1-PH	3-PH	
AL-REDm 600-4	AL-RED 600-4	1 1/4"	1"	1.24	10.5	7.13	3.62	3.68	7.30	4.72	7.13	2.69	0.35	12.5	14.5	
AL-REDm 610-4	AL-RED 610-4				11.6	8.62 *	4.21	4.41	8.62	6.49	8.70	3.17	0.37	25.3	25.3	
AL-REDm 620-4	AL-RED 620-4			1.32	14.6	14.6/15.3	9.88	4.72	4.63	9.35	7.08	9.61	3.41	0.43	34.6	34.6
AL-REDm 650-4	AL-RED 650-4															
AL-REDm 660-4	AL-RED 660-4															
AL-REDm 670-4	AL-RED 670-4															
AL-REDm 660M-4	AL-RED 660M-4															
AL-REDm 670M-4	AL-RED 670M-4															
AL-REDm 650L-4	AL-RED 650L-4															
AL-REDm 660L-4	AL-RED 660L-4															
AL-REDm 670L-4	AL-RED 670L-4	14.6/15.3	38.6	42.7												

(\*) h = 0.9 in for single-phase versions at 110 V or 127 V

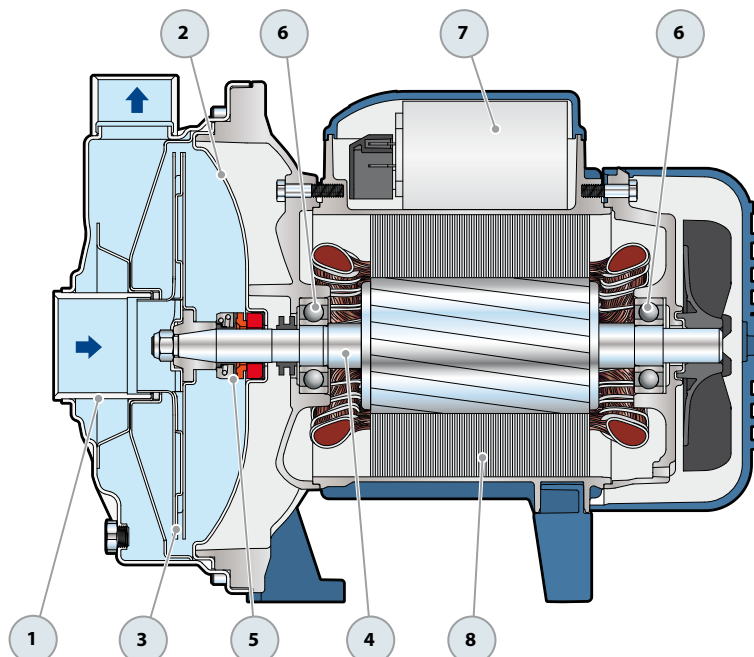
## ABSORPTION

MODEL	VOLTAGE		
	220 V	110 V	127 V
Single-phase			
AL-REDm 600-4	2.7 A	6.2 A	4.7 A
AL-REDm 610-4	4.2 A	8.5 A	7.3 A
AL-REDm 620-4	6.5 A	13.0 A	12.0 A
AL-REDm 650-4	7.8 A	15.6 A	13.5 A
AL-REDm 660-4	9.4 A	18.8 A	16.3 A
AL-REDm 670-4	12.8 A	25.6 A	22.2 A
AL-REDm 660M-4	9.8 A	19.6 A	17.0 A
AL-REDm 670M-4	12.2 A	24.4 A	21.1 A
AL-REDm 650L-4	9.0 A	18.0 A	15.6 A
AL-REDm 660L-4	10.5 A	21.0 A	18.2 A
AL-REDm 670L-4	13.5 A	27.0 A	23.4 A

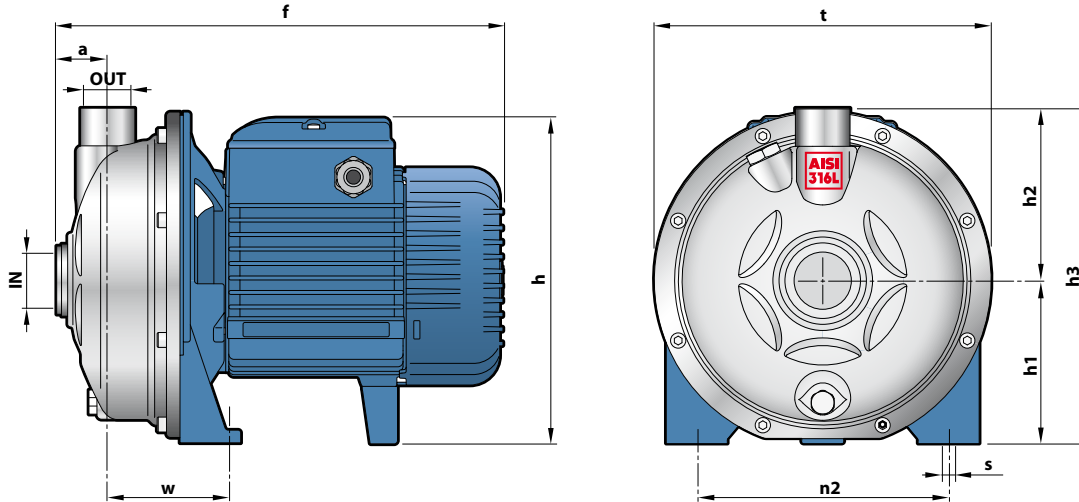
MODEL	VOLTAGE			
	220 V	380 V	220 V	440 V
Three-phase				
AL-RED 600-4	2.4 A	1.4 A	2.0 A	1.2 A
AL-RED 610-4	2.8 A	1.6 A	2.3 A	1.3 A
AL-RED 620-4	6.0 A	3.5 A	4.2 A	2.5 A
AL-RED 650-4	6.6 A	3.8 A	5.5 A	3.2 A
AL-RED 660-4	7.5 A	4.3 A	6.0 A	3.5 A
AL-RED 670-4	8.8 A	5.1 A	7.0 A	4.0 A
AL-RED 660M-4	7.8 A	4.5 A	6.1 A	3.5 A
AL-RED 670M-4	8.3 A	4.8 A	8.1 A	4.2 A
AL-RED 650L-4	5.1 A	2.9 A	4.0 A	2.2 A
AL-RED 660L-4	6.0 A	3.5 A	4.5 A	2.6 A
AL-RED 670L-4	9.0 A	5.2 A	7.2 A	4.1 A

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Stainless steel AISI 316L complete with threaded ports in compliance with ISO 228/1						
2	<b>BODY BACKPLATE</b>	Stainless steel AISI 316L						
3	<b>IMPELLER</b>	Stainless steel AISI 316L						
4	<b>MOTOR SHAFT</b>	Stainless steel AISI 316L						
5	<b>MECHANICAL SEAL</b>	<i>Pump</i>	<i>Seal</i>	<i>Shaft</i>	<i>Materials</i>			
		<i>Model</i>	<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>	<i>Spring</i>
		AL-RED 600 AL-RED 610	AR-12ST6	Ø 0.4 in	Ceramic	Graphite	NBR	AISI 316
		AL-RED 620 AL-RED 650	AR-14ST6	Ø 0.5 in	Ceramic	Graphite	NBR	AISI 316
		AL-RED 660 AL-RED 670	FN-18ST6	Ø 0.7 in	Graphite	Ceramic	NBR	AISI 316
6	<b>BEARINGS</b>	<i>Pump</i>	<i>Model</i>					
		AL-RED 600 AL-RED 610	6201 ZZ / 6201 ZZ					
		AL-RED 620	6203 ZZ / 6203 ZZ					
		AL-RED 650 AL-RED 660 AL-RED 670	6204 ZZ / 6204 ZZ					
7	<b>CAPACITOR</b>	<i>Pump</i>	<i>Capacitance</i>					
		<i>Single-phase</i>	<i>(220 V)</i>		<i>(110 V or 127 V)</i>			
		AL-REDm 600	10 µF - 450 VL	25 µF - 250 VL				
		AL-REDm 610	14 µF - 450 VL	25 µF - 250 VL				
		AL-REDm 620	25 µF - 450 VL	60 µF - 300 VL				
		AL-REDm 650	25 µF - 450 VL	60 µF - 250 VL				
		AL-REDm 650L AL-REDm 660	31.5 µF - 450 VL	60 µF - 250 VL				
		AL-REDm 660M/L AL-REDm 670	50 µF - 450 VL	80 µF - 250 VL				
		AL-REDm 670M/L						
8	<b>ELECTRIC MOTOR</b>	AL-REDm -6: single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding.						
		AL-RED -6: three-phase 220/380 V - 60 Hz or 220/440 V - 60 Hz.						
		<p>➔ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b></p> <ul style="list-style-type: none"> <li>- Insulation: class F</li> <li>- Protection: IP X4</li> </ul>						



## DIMENSIONS AND WEIGHT



MODEL NUMBER		PORTS		DIMENSIONS (inches)										Lbs	
Single-phase	Three-phase	IN	OUT	a	f	h	h1	h2	h3	n2	t	w	s	1-PH	3-PH
AL-REDm 600-6	AL-RED 600-6	1 1/4"	1"	1.24	10.5	7.13	3.62	3.68	7.30	4.72	7.13	2.69	0.35	12.6	14.5
AL-REDm 610-6	AL-RED 610-6				11.6	8.62 *	4.21	4.41	8.62	6.49	8.70	3.17	0.37	25.3	25.3
AL-REDm 620-6	AL-RED 620-6				14.6	32.2	32.2								
AL-REDm 650-6	AL-RED 650-6			1.32	14.6/15.3	9.88	0.47	4.62	9.33	7.08	9.61	3.41	0.43	38.8	43.2
AL-REDm 660-6	AL-RED 660-6				34.6									34.6	
AL-REDm 670-6	AL-RED 670-6				38.6									42.8	
AL-REDm 660M-6	AL-RED 660M-6				34.6									34.6	
AL-REDm 670M-6	AL-RED 670M-6				34.6									34.6	
AL-REDm 650L-6	AL-RED 650L-6				38.6									42.9	
AL-REDm 660L-6	AL-RED 660L-6			14.6	34.6	34.6									
AL-REDm 670L-6	AL-RED 670L-6			14.6/15.3	38.6	42.9									

(\*) h=233 mm for single-phase versions at 110 V or 127 V

## ABSORPTION

MODEL	VOLTAGE		
	220 V	110 V	127 V
Single-phase			
AL-REDm 600-6	2.7 A	6.2 A	4.7 A
AL-REDm 610-6	4.2 A	8.5 A	7.3 A
AL-REDm 620-6	6.5 A	13.0 A	12.0 A
AL-REDm 650-6	7.8 A	15.6 A	13.5 A
AL-REDm 660-6	9.4 A	18.8 A	16.3 A
AL-REDm 670-6	12.8 A	25.6 A	22.2 A
AL-REDm 660M-6	9.8 A	19.6 A	17.0 A
AL-REDm 670M-6	12.2 A	24.4 A	21.1 A
AL-REDm 650L-6	9.0 A	18.0 A	15.6 A
AL-REDm 660L-6	10.5 A	21.0 A	18.2 A
AL-REDm 670L-6	13.5 A	27.0 A	23.4 A

MODEL	VOLTAGE			
	220 V	380 V	220 V	440 V
Three-phase				
AL-RED 600-6	2.4 A	1.4 A	2.0 A	1.2 A
AL-RED 610-6	2.8 A	1.6 A	2.3 A	1.3 A
AL-RED 620-6	6.0 A	3.5 A	4.2 A	2.5 A
AL-RED 650-6	6.6 A	3.8 A	5.5 A	3.2 A
AL-RED 660-6	7.5 A	4.3 A	6.0 A	3.5 A
AL-RED 670-6	8.8 A	5.1 A	7.0 A	4.0 A
AL-RED 660M-6	7.8 A	4.5 A	6.1 A	3.5 A
AL-RED 670M-6	8.3 A	4.8 A	8.1 A	4.2 A
AL-RED 650L-6	5.1 A	2.9 A	4.0 A	2.2 A
AL-RED 660L-6	6.0 A	3.5 A	4.5 A	2.6 A
AL-RED 670L-6	9.0 A	5.2 A	7.2 A	4.1 A