

# AL-RED

## Stainless steel centrifugal pumps

### AL-RED -4

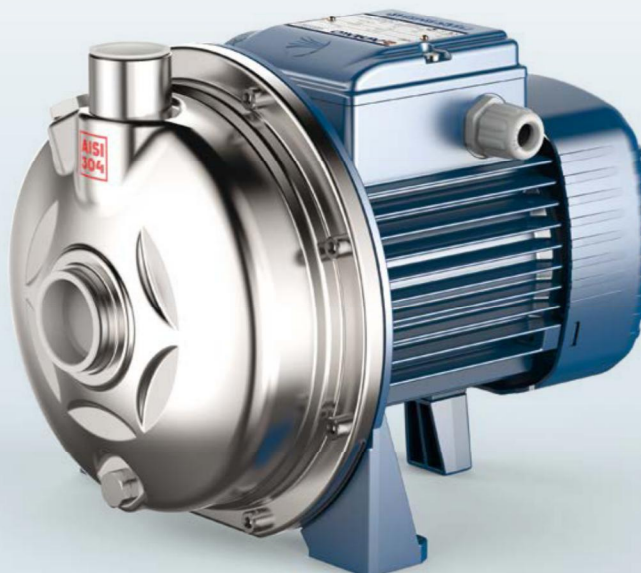
Pump body: **stainless steel AISI 304**  
Impeller: **stainless steel AISI 304**  
Shaft: **stainless steel AISI 431**

### AL-RED -6

Pump body: **stainless steel AISI 316L**  
Impeller: **stainless steel AISI 316L**  
Shaft: **stainless steel AISI 316L**



- Clean water
- Domestic use
- Agricultural use
- Industrial use



### PERFORMANCE RANGE

- Maximum flow rate **280 l/min** (16.8 m<sup>3</sup>/h)
- Maximum head **60 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure:
  - **6 bar** for AL-RED 600-610-620
  - **8 bar** for AL-RED 650-660-670-650M-660M-670M  
AL-RED 650L-660L-670L
- Continuous service **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

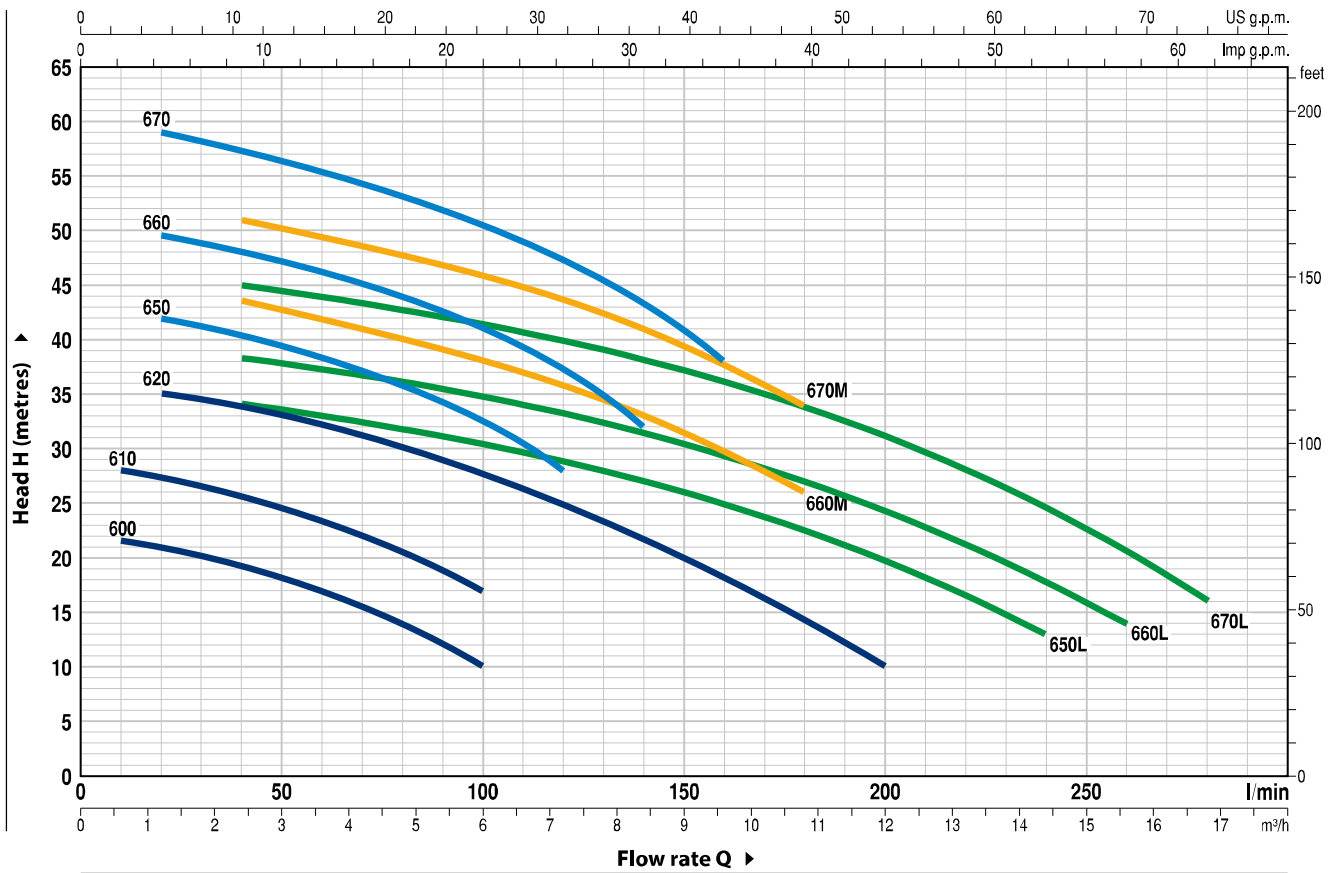
- Pump body with NPT ANSI B 1.20.1 threaded ports
- Special mechanical seal
- Other voltages
- IP X5 class protection for  
AL-RED 650-660-670-650M-660M-670M  
AL-RED 650L-660L-670L

### GUARANTEE

2 years subject to terms and conditions

### CHARACTERISTIC CURVES AND PERFORMANCE DATA

60 Hz n= 3450 min<sup>-1</sup> HS= 0 m



MODEL		POWER (P <sub>2</sub> )			Q	Flow rate																	
Single-phase	Three-phase	kW	HP	▲		m <sup>3</sup> /h	0	0.6	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8	12.0	14.4	15.6	16.8		
					l/min	0	10	20	40	60	80	100	120	140	160	180	200	240	260	280			
AL-REDm 600-4	AL-RED 600-4	0.37	0.50	IE3	H metres	22	21.5	21	19.5	17	14	10											
AL-REDm 600-6	AL-RED 600-6																						
AL-REDm 610-4	AL-RED 610-4	0.60	0.85	IE3		28.5	28	27.5	25.5	23.5	20.5	17											
AL-REDm 610-6	AL-RED 610-6																						
AL-REDm 620-4	AL-RED 620-4	0.75	1	IE3		36	-	35	33.5	32	30	27.5	24.5	21.5	18	14	10						
AL-REDm 620-6	AL-RED 620-6																						
AL-REDm 650-4	AL-RED 650-4	1.1	1.5	IE3		43.5	-	42	40.5	38.5	36	32.5	28										
AL-REDm 650-6	AL-RED 650-6																						
AL-REDm 660-4	AL-RED 660-4	1.5	2	IE3		51	-	49.5	48	46	44	41	37	32									
AL-REDm 660-6	AL-RED 660-6																						
AL-REDm 670-4	AL-RED 670-4	2.2	3	IE3		60	-	59	57	55	53	50.5	47	43	38								
AL-REDm 670-6	AL-RED 670-6																						
AL-REDm 660M-4	AL-RED 660M-4	1.5	2	IE3		46	-	-	43.5	42	40	38	36	33	30	26							
AL-REDm 660M-6	AL-RED 660M-6																						
AL-REDm 670M-4	AL-RED 670M-4	2.2	3	IE3		53	-	-	51	49.5	48	46	43.5	41	37.5	34							
AL-REDm 670M-6	AL-RED 670M-6																						
AL-REDm 650L-4	AL-RED 650L-4	1.1	1.5	IE3		36	-	-	34	33	31.5	30.5	29	27	25	22.5	19.5	13					
AL-REDm 650L-6	AL-RED 650L-6																						
AL-REDm 660L-4	AL-RED 660L-4	1.5	2	IE3	40	-	-	38.5	37.5	36	35	33	31.5	29.5	27	24.5	18	14					
AL-REDm 660L-6	AL-RED 660L-6																						
AL-REDm 670L-4	AL-RED 670L-4	2.2	3	IE3	47	-	-	45	44	42.5	41.5	40	38	36	34	31	24.5	20.5	16				
AL-REDm 670L-6	AL-RED 670L-6																						

Q = Flow rate H = Total manometric head HS = Suction height

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

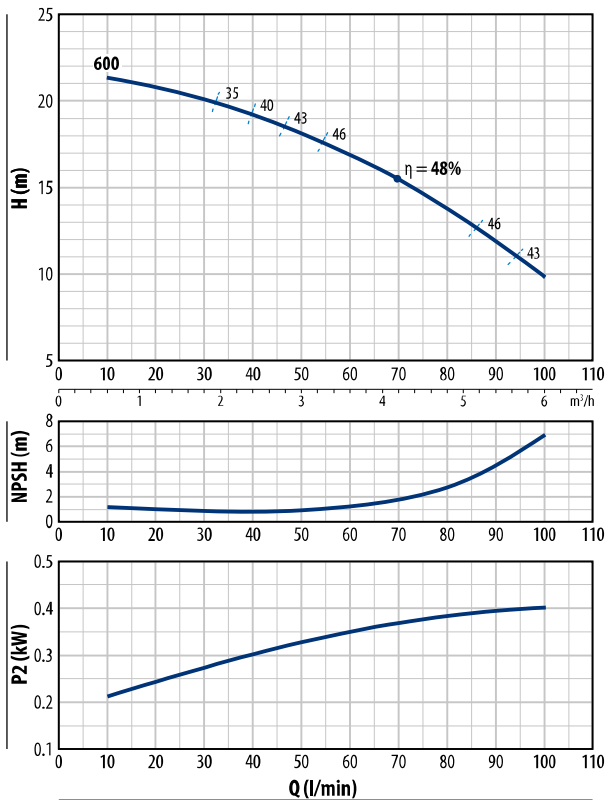
▲ Three-phase motor efficiency class (IEC 60034-30-1)

# AL-RED

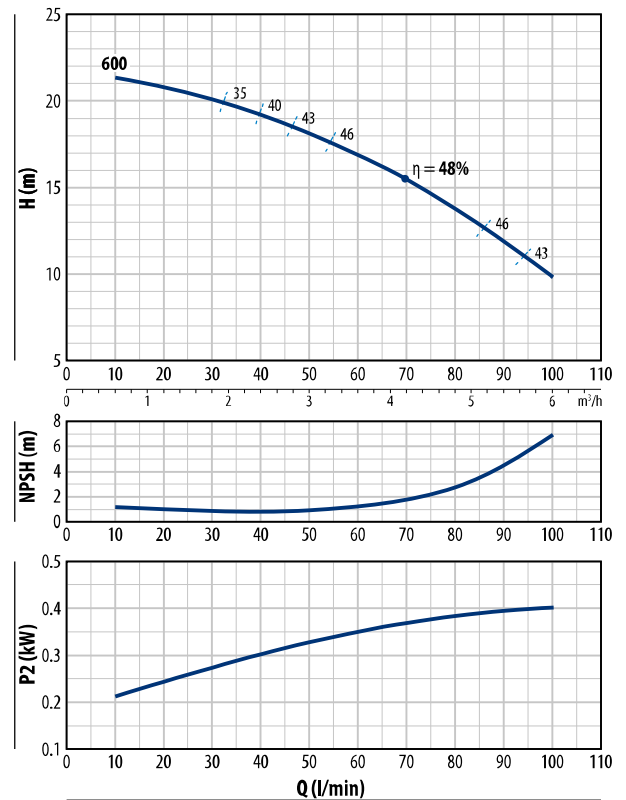
PERFORMANCE RANGE

60 Hz  $n = 3450 \text{ min}^{-1}$  HS = 0 m

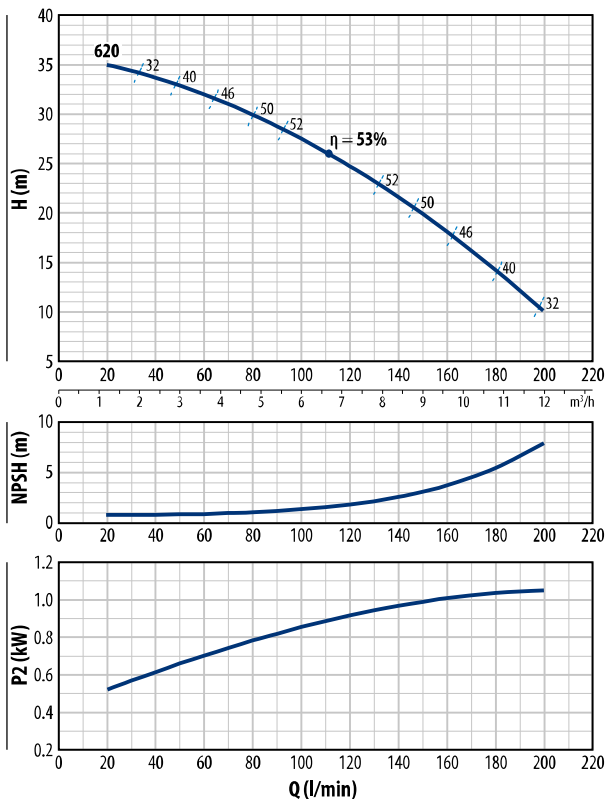
## AL RED 600



## AL RED 610



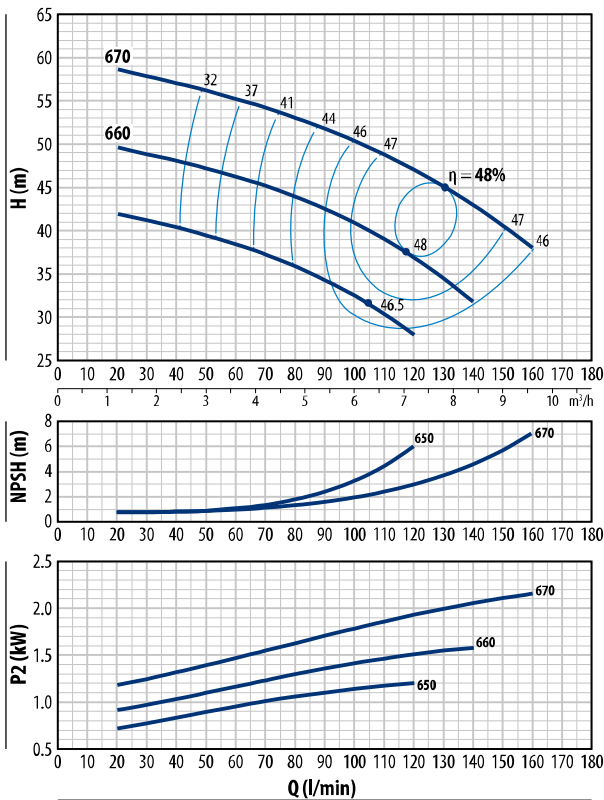
## AL RED 620



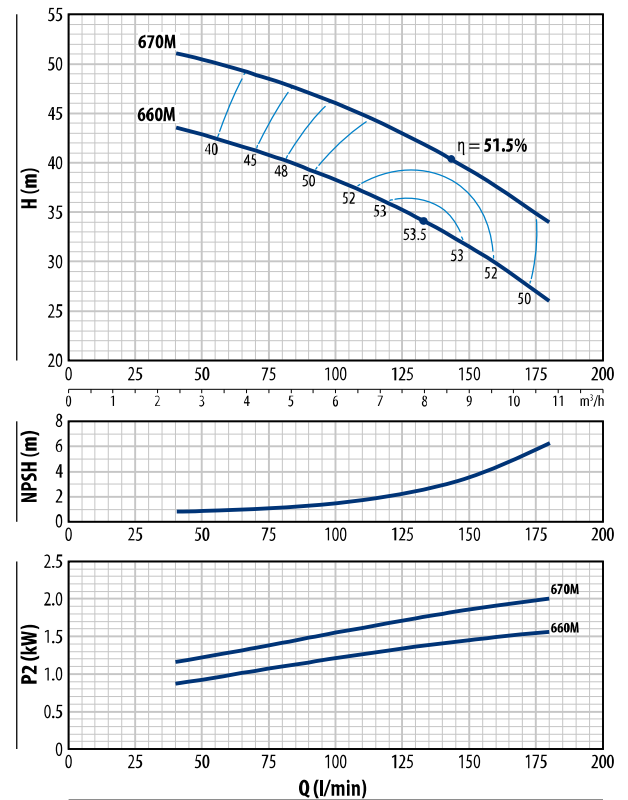
**PERFORMANCE RANGE**

60 Hz n= 3450 min<sup>-1</sup> HS= 0 m

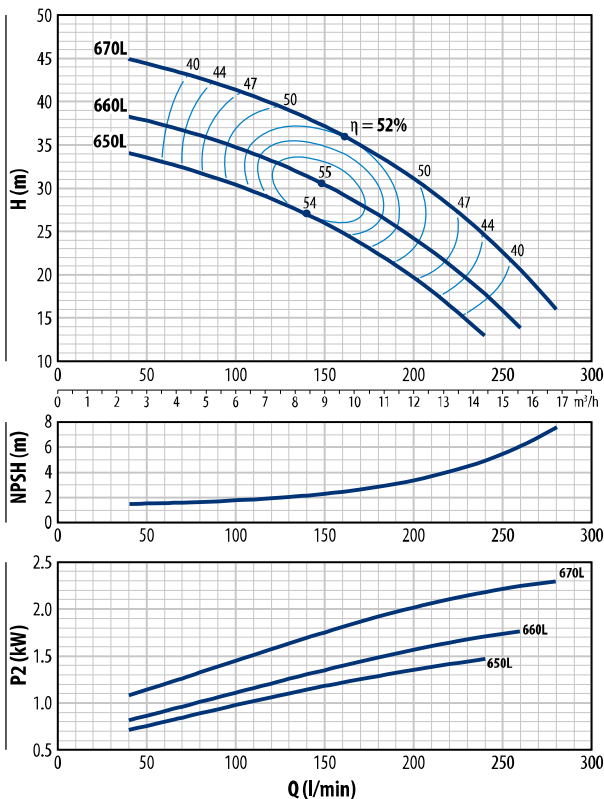
**AL RED 650-660-670**



**AL RED 660M-670M**



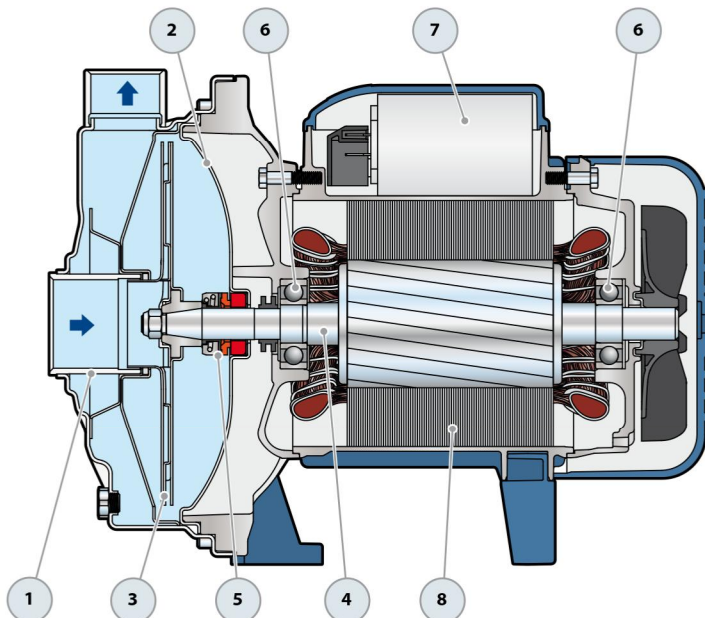
**AL RED 650L-660L-670L**



# AL-RED -4

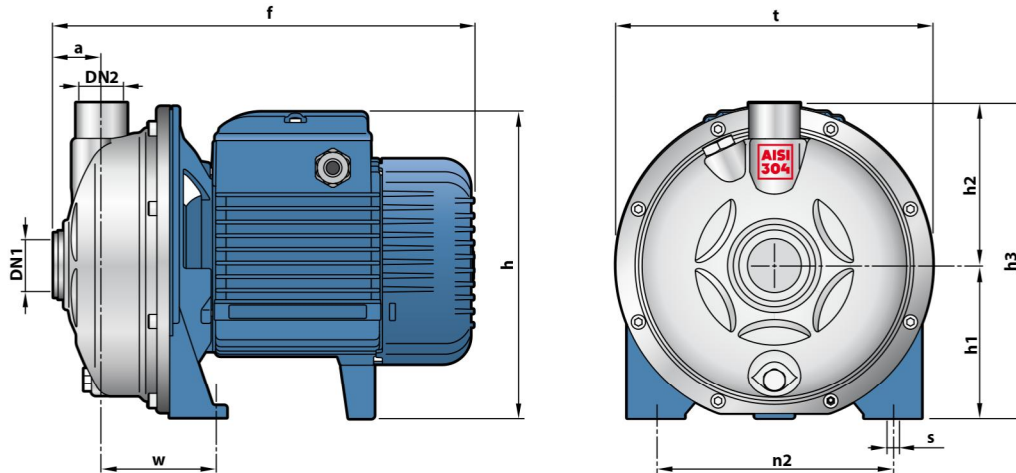
## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

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 Model</i>	<i>Seal Model</i>	<i>Shaft Diameter</i>	<i>Materials</i>		
					<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>
							<i>Spring</i>
		AL-RED 600	AR-12	Ø 12 mm	Ceramic	Graphite	NBR
		AL-RED 610					AISI 304
		AL-RED 620	AR-14	Ø 14 mm	Ceramic	Graphite	NBR
		AL-RED 650					AISI 304
		AL-RED 660	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
		AL-RED 670					AISI 316
6	<b>BEARINGS</b>	<i>Pump Model</i>	<i>Model</i>				
		AL-RED 600	6201 ZZ / 6201 ZZ				
		AL-RED 610					
		AL-RED 620	6203 ZZ / 6203 ZZ				
		AL-RED 650					
		AL-RED 660	6204 ZZ / 6204 ZZ				
		AL-RED 670					
7	<b>CAPACITOR</b>	<i>Pump Model</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>	<b>AL-REDm -4:</b> single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding. <b>AL-RED -4:</b> 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		PORTS		DIMENSIONS mm										kg									
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n2	t	w	s	1~	3~								
AL-REDm 600-4	AL-RED 600-4	1 1/4"	1"	31.5	266	181	92	93.5	185.5	120	181	68.5	9	5.7	6.6								
AL-REDm 610-4	AL-RED 610-4				7.2									7.2									
AL-REDm 620-4	AL-RED 620-4				296									219*	107	112	219	165	221	80.5	9.5	11.5	11.5
AL-REDm 650-4	AL-RED 650-4				370									14.6	14.6								
AL-REDm 660-4	AL-RED 660-4			33.5	251	120	117.5	237.5	180	244	86.5	11	15.8	15.8									
AL-REDm 670-4	AL-RED 670-4												370/390	17.6	19.6								
AL-REDm 660M-4	AL-RED 660M-4												370/390	15.7	15.7								
AL-REDm 670M-4	AL-RED 670M-4			370	17.5	19.4																	
AL-REDm 650L-4	AL-RED 650L-4			370/390	251	120	117.5	237.5	180	244	86.5	11	15.7	15.7									
AL-REDm 660L-4	AL-RED 660L-4												15.7	15.7									
AL-REDm 670L-4	AL-RED 670L-4	17.5	19.5																				

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

## ABSORPTION

MODEL	VOLTAGE		
	220 V	110 V	127 V
Single-phase	220 V	110 V	127 V
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	220 V	380 V	220 V	440 V
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

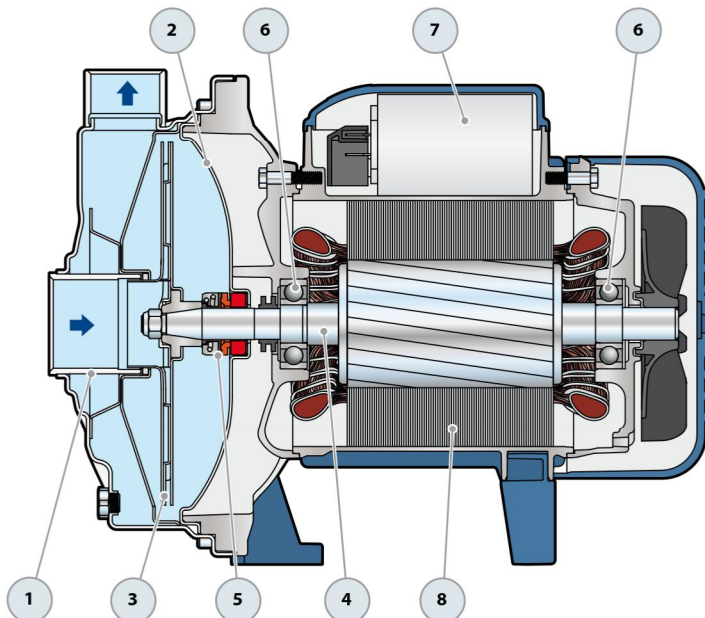
## PALLETIZATION

MODEL		GROUPAGE	CONTAINER
Single-phase	Three-phase	n. pumps	n. pumps
AL-REDm 600-4	AL-RED 600-4	96	144
AL-REDm 610-4	AL-RED 610-4	96	144
AL-REDm 620-4	AL-RED 620-4	50	80
AL-REDm 650-4, 650L-4	AL-RED 650-4, 650L-4	45	63
AL-REDm 660-4, 660M-4, 660L-4	AL-RED 660-4, 660M-4, 660L-4	45	63
AL-REDm 670-4, 670M-4, 670L-4	AL-RED 670-4, 670M-4, 670L-4	45	63

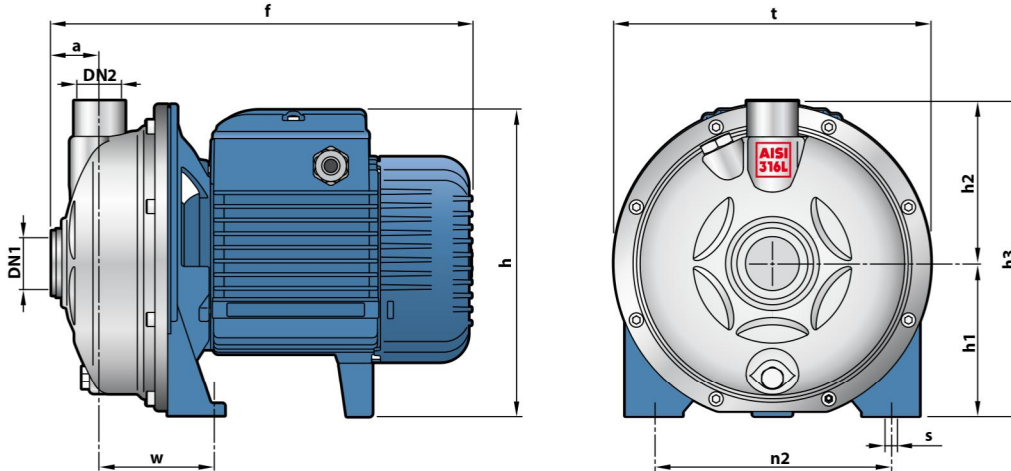
# AL-RED -6

## 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 12 mm	Ceramic	Graphite	NBR	AISI 316
		AL-RED 620 AL-RED 650 AL-RED 660 AL-RED 670	AR-14ST6	Ø 14 mm	Ceramic	Graphite	NBR	AISI 316
			FN-18ST6	Ø 18 mm	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 AL-REDm 670M/L	50 µF - 450 VL			80 µF - 250 VL				
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> <p>– Insulation: class F</p> <p>– Protection: IP X4</p>						



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n2	t	w	s	1~	3~
AL-REDm 600-6	AL-RED 600-6	1 1/4"	1"	31.5	266	181	92	93.5	185.5	120	181	68.5	9	5.7	6.6
AL-REDm 610-6	AL-RED 610-6				296	219*	107	112	219	165	221	80.5	9.5	7.2	7.2
AL-REDm 620-6	AL-RED 620-6				370	14.6	14.6								
AL-REDm 650-6	AL-RED 650-6			33.5	370/390	17.6	19.6								
AL-REDm 660-6	AL-RED 660-6				370/390	15.7	15.7								
AL-REDm 670-6	AL-RED 670-6			251	120	117.5	237.5	180	244	86.5	11	17.5	19.4		
AL-REDm 660M-6	AL-RED 660M-6			370	15.7	15.7									
AL-REDm 670M-6	AL-RED 670M-6				17.5	19.4									
AL-REDm 650L-6	AL-RED 650L-6				15.7	15.7									
AL-REDm 660L-6	AL-RED 660L-6			370/390	17.5	19.5									
AL-REDm 670L-6	AL-RED 670L-6	17.5	19.5												

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

## ABSORPTION

MODEL	VOLTAGE		
	220 V	110 V	127 V
Single-phase	220 V	110 V	127 V
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	220 V	380 V	220 V	440 V
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

## PALLETIZATION

MODEL		GROUPAGE	CONTAINER
Single-phase	Three-phase	n. pumps	n. pumps
AL-REDm 600-6	AL-RED 600-6	96	144
AL-REDm 610-6	AL-RED 610-6	96	144
AL-REDm 620-6	AL-RED 620-6	50	80
AL-REDm 650-6, 650L-6	AL-RED 650-6, 650L-6	45	63
AL-REDm 660-6, 660M-6, 660L-6	AL-RED 660-6, 660M-6, 660L-6	45	63
AL-REDm 670-6, 670M-6, 670L-6	AL-RED 670-6, 670M-6, 670L-6	45	63