

# 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

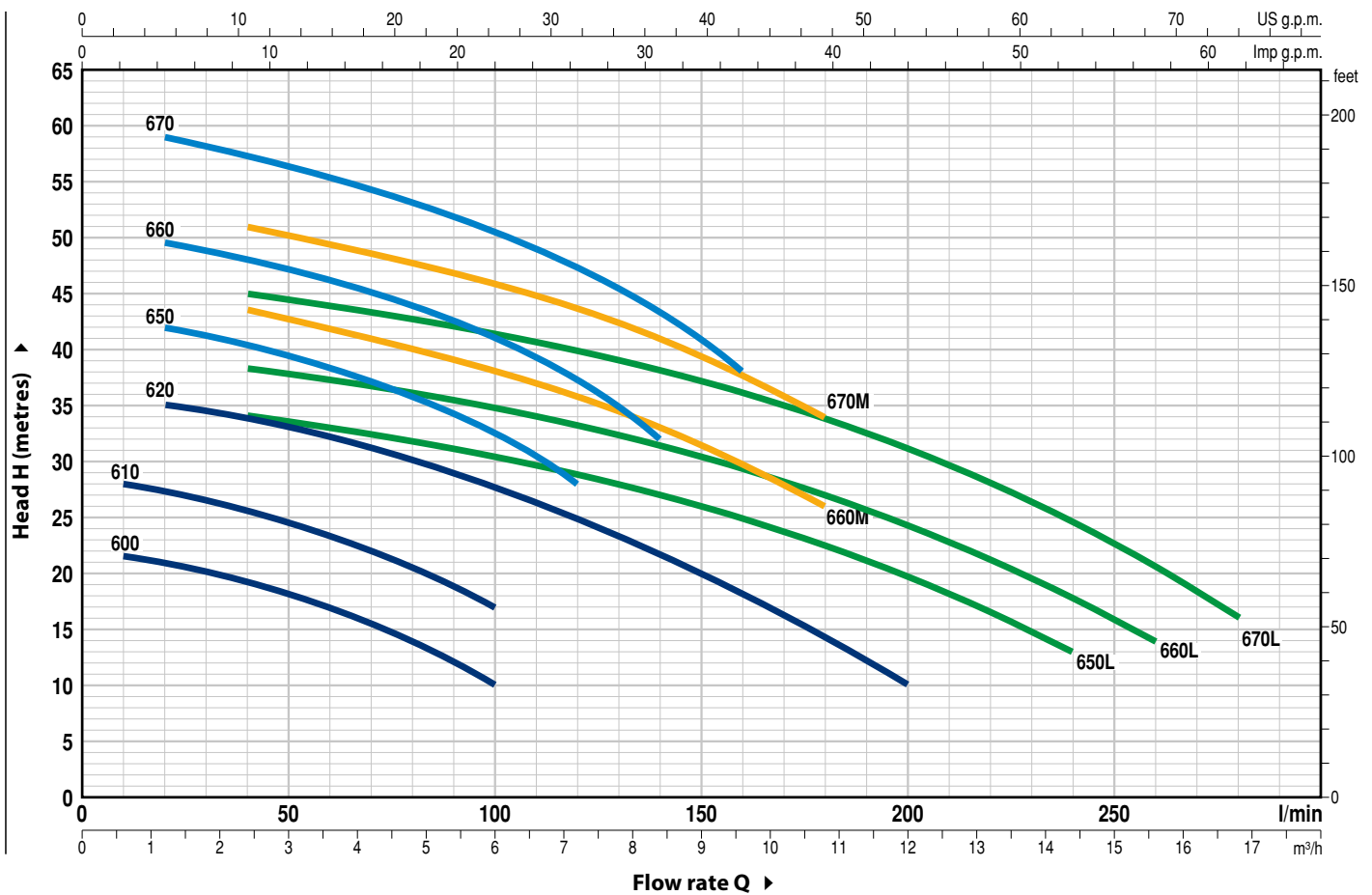
- Pump body with NPT ANSI B 1.20.1 threaded ports
- Special mechanical seal
- Other voltages
- IP X5 class protection for  
AL-RED 650-660-670-650M-660M-670M  
AL-RED 650L-660L-670L

### 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	0	22	21.5	21	19.5	17	14	10												
AL-REDm 600-6	AL-RED 600-6						28.5	28	27.5	25.5	23.5	20.5	17												
AL-REDm 610-4	AL-RED 610-4	0.60	0.85	IE3			36	-	35	33.5	32	30	27.5	24.5	21.5	18	14	10							
AL-REDm 610-6	AL-RED 610-6						43.5	-	42	40.5	38.5	36	32.5	28											
AL-REDm 620-4	AL-RED 620-4	0.75	1	IE3			51	-	49.5	48	46	44	41	37	32										
AL-REDm 620-6	AL-RED 620-6						60	-	59	57	55	53	50.5	47	43	38									
AL-REDm 650-4	AL-RED 650-4	1.1	1.5	IE3			46	-	-	43.5	42	40	38	36	33	30	26								
AL-REDm 650-6	AL-RED 650-6						53	-	-	51	49.5	48	46	43.5	41	37.5	34								
AL-REDm 660-4	AL-RED 660-4	1.5	2	IE3			36	-	-	34	33	31.5	30.5	29	27	25	22.5	19.5	13						
AL-REDm 660-6	AL-RED 660-6						40	-	-	38.5	37.5	36	35	33	31.5	29.5	27	24.5	18	14					
AL-REDm 670-4	AL-RED 670-4	2.2	3	IE3			47	-	-	45	44	42.5	41.5	40	38	36	34	31	24.5	20.5	16				
AL-REDm 670-6	AL-RED 670-6						60	-	-	59	57	55	53	50.5	47	43	38								
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						53	-	-	51	49.5	48	46	43.5	41	37.5	34								
AL-REDm 670M-4	AL-RED 670M-4	2.2	3	IE3			36	-	-	34	33	31.5	30.5	29	27	25	22.5	19.5	13						
AL-REDm 670M-6	AL-RED 670M-6						40	-	-	38.5	37.5	36	35	33	31.5	29.5	27	24.5	18	14					
AL-REDm 650L-4	AL-RED 650L-4	1.1	1.5	IE3			47	-	-	45	44	42.5	41.5	40	38	36	34	31	24.5	20.5	16				
AL-REDm 650L-6	AL-RED 650L-6						60	-	-	59	57	55	53	50.5	47	43	38								
AL-REDm 660L-4	AL-RED 660L-4	1.5	2	IE3			46	-	-	43.5	42	40	38	36	33	30	26								
AL-REDm 660L-6	AL-RED 660L-6						53	-	-	51	49.5	48	46	43.5	41	37.5	34								
AL-REDm 670L-4	AL-RED 670L-4	2.2	3	IE3			36	-	-	34	33	31.5	30.5	29	27	25	22.5	19.5	13						
AL-REDm 670L-6	AL-RED 670L-6						40	-	-	38.5	37.5	36	35	33	31.5	29.5	27	24.5	18	14					

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

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

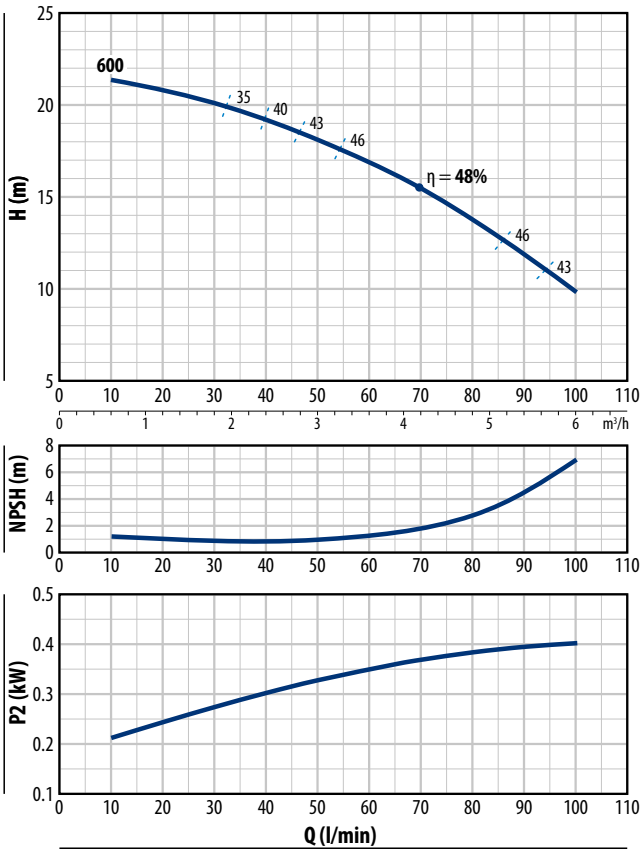
▲ Three-phase motor efficiency class (IEC 60034-30-1)

# AL-RED

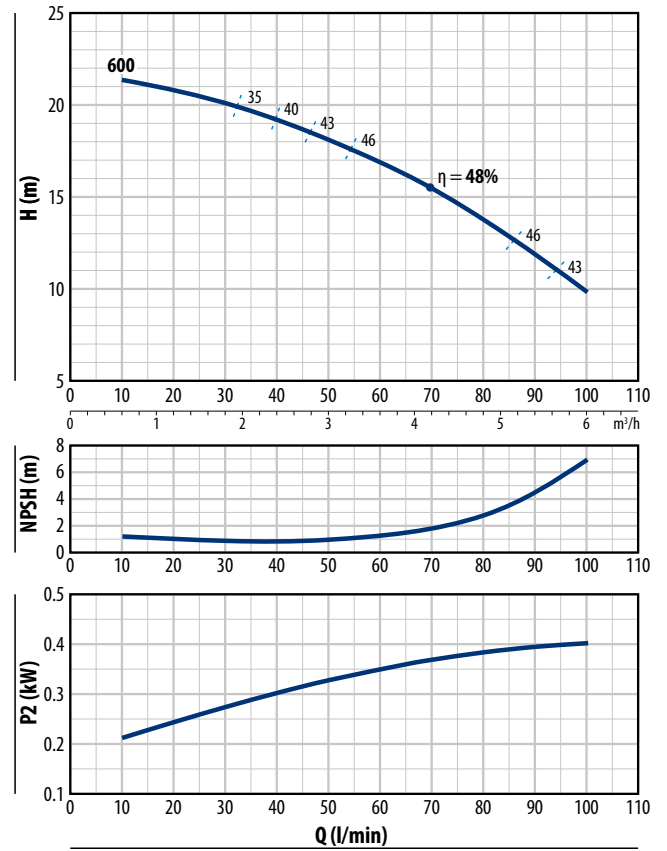
PERFORMANCE RANGE

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

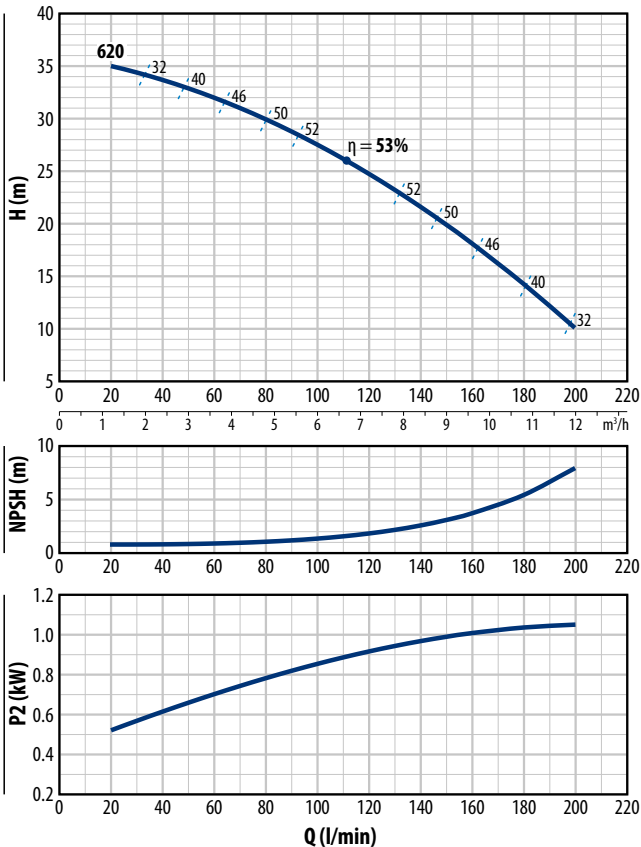
## AL RED 600



## AL RED 610



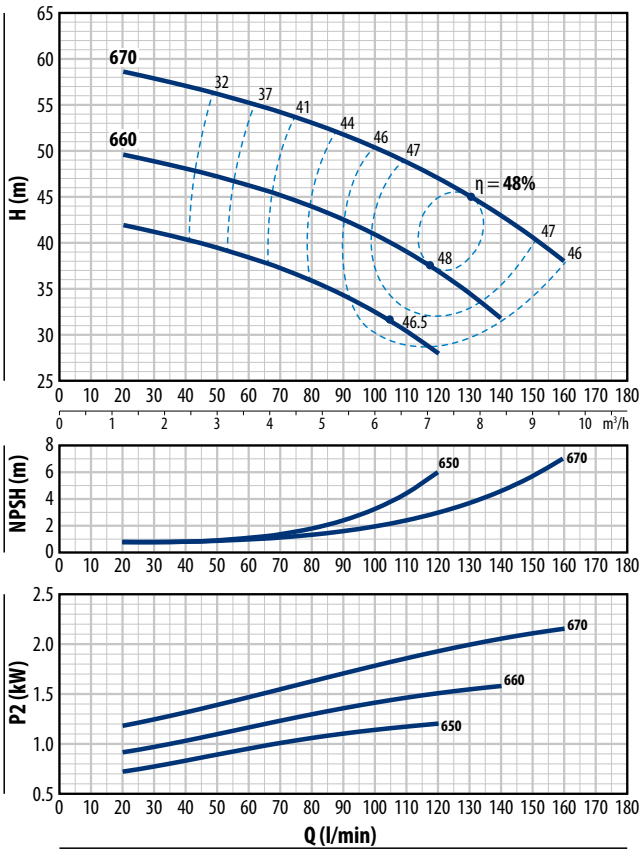
## AL RED 620



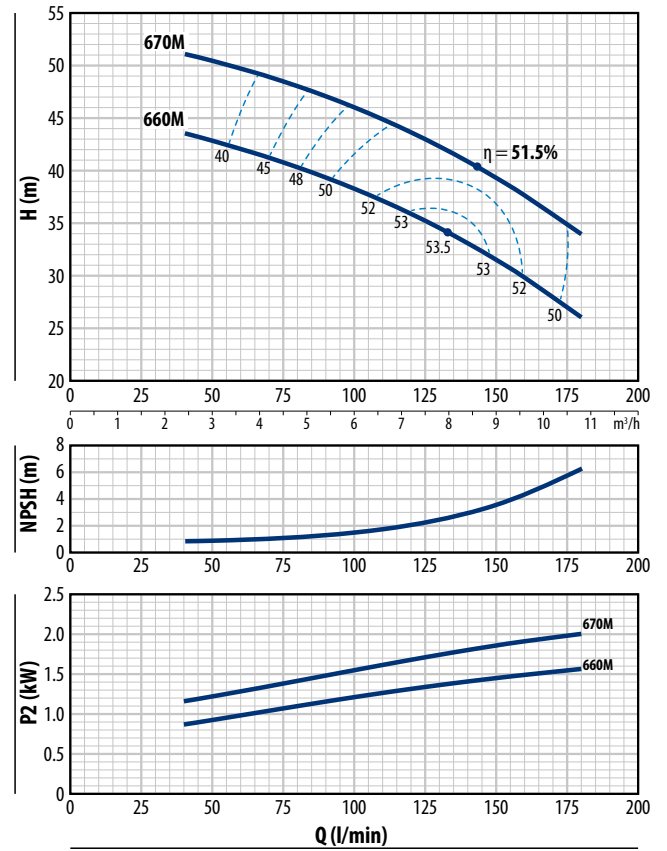
**PERFORMANCE RANGE**

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

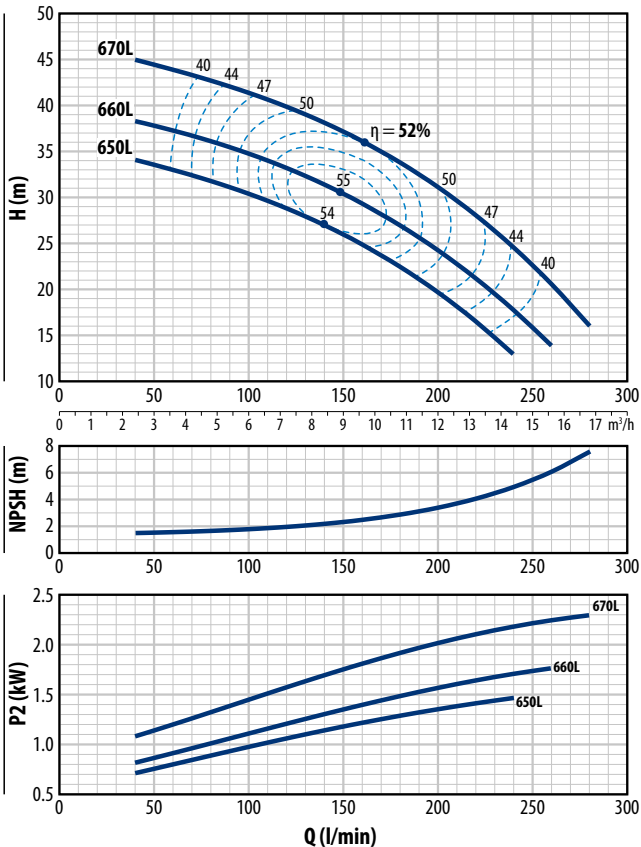
**AL RED 650-660-670**



**AL RED 660M-670M**



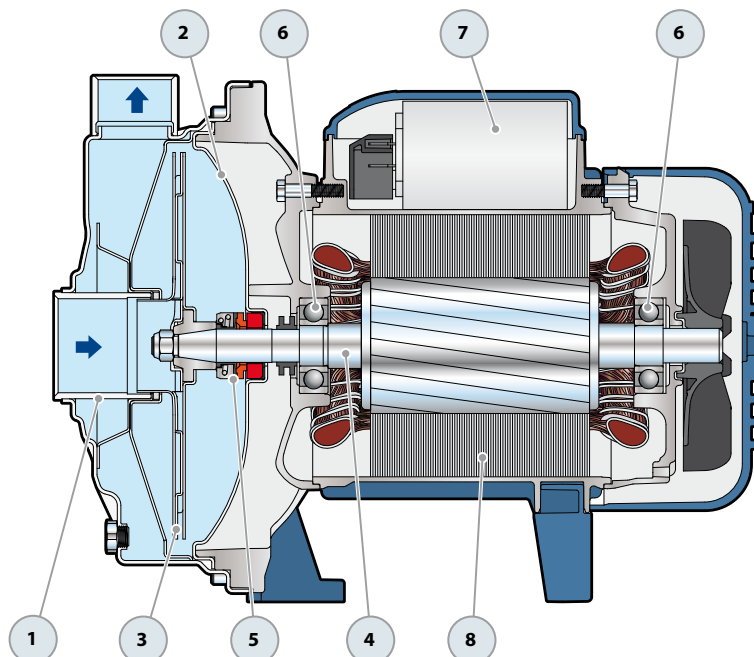
**AL RED 650L-660L-670L**



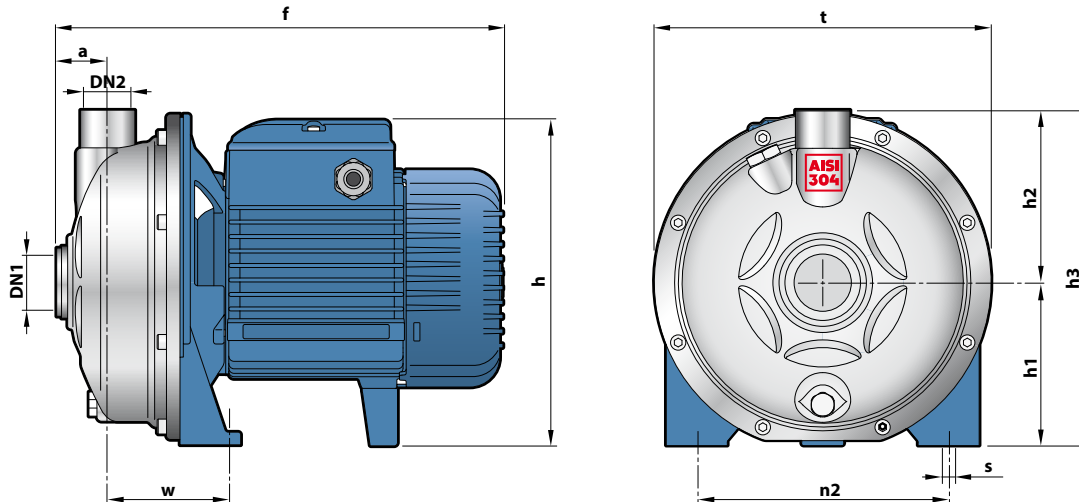
# AL-RED -4

## 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</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	AR-12	Ø 12 mm	Ceramic	Graphite	NBR	AISI 304
		AL-RED 610						
		AL-RED 620	AR-14	Ø 14 mm	Ceramic	Graphite	NBR	AISI 304
		AL-RED 650						
AL-RED 660	FN-18	Ø 18 mm	Graphite	Ceramic	NBR	AISI 316		
AL-RED 670								
6	<b>BEARINGS</b>	<i>Pump</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</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	31.5 µF - 450 VL		60 µF - 250 VL			
		AL-REDm 660						
		AL-REDm 660M/L	50 µF - 450 VL      80 µF - 250 VL					
		AL-REDm 670						
AL-REDm 670M/L								
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.						
		<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		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				296	219 *	107	112	219	165	221	80.5	9.5	11.5	11.5														
AL-REDm 620-4	AL-RED 620-4				370											14.6	14.6												
AL-REDm 650-4	AL-RED 650-4			33.5	370/390	370/390	251	120	117.5	237.5	180	244	86.5	11	15.7	15.7													
AL-REDm 660-4	AL-RED 660-4																370										15.7	15.7	
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											15.7	15.7
AL-REDm 650L-4	AL-RED 650L-4																370/390											17.5	19.4
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

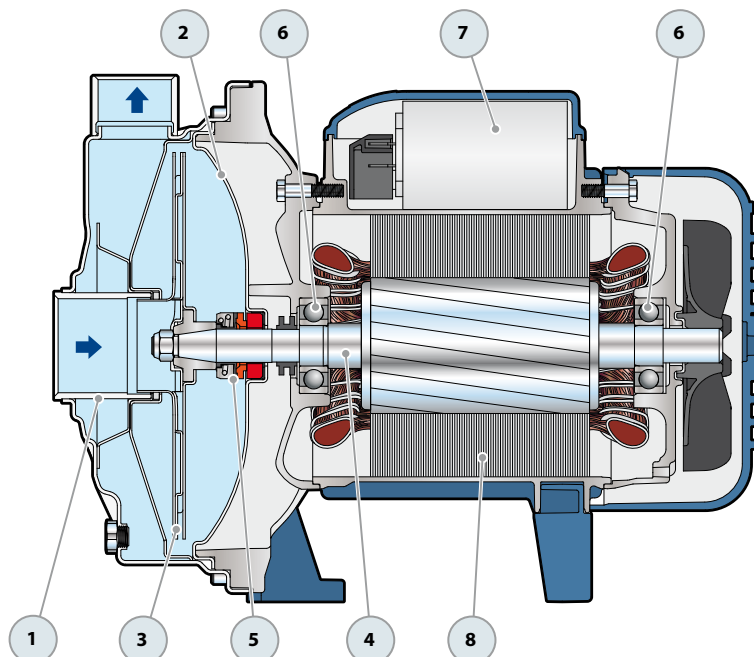
## PALLETIZATION

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

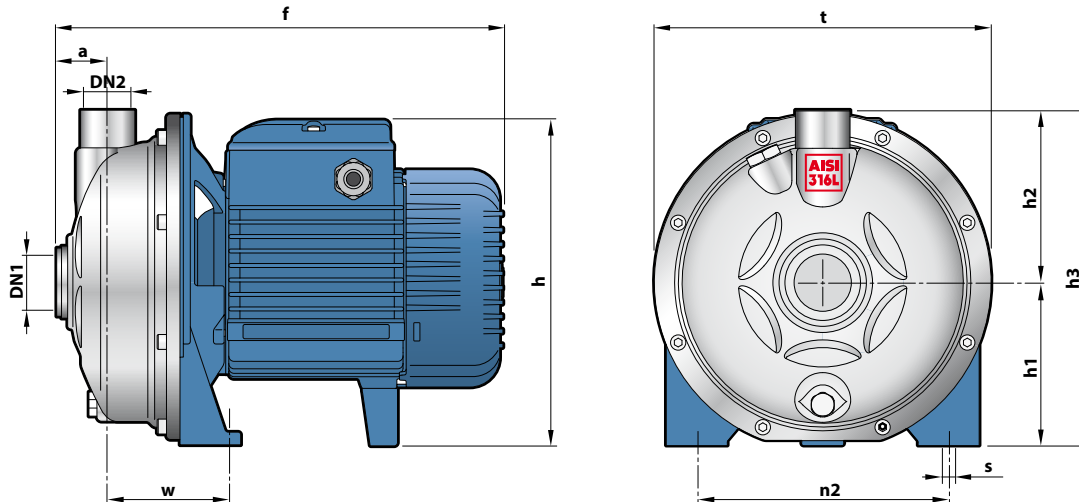
## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Stainless steel AISI 316L complete with threaded ports in compliance with ISO 228/1						
<b>2 BODY BACKPLATE</b>	Stainless steel AISI 316L						
<b>3 IMPELLER</b>	Stainless steel AISI 316L						
<b>4 MOTOR SHAFT</b>	Stainless steel AISI 316L						
<b>5 MECHANICAL SEAL</b>	<b>Pump</b>	<b>Seal</b>	<b>Shaft</b>	<b>Materials</b>			
	<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
<b>6 BEARINGS</b>	<b>Pump</b>	<b>Model</b>					
	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					
<b>7 CAPACITOR</b>	<b>Pump</b>	<b>Capacitance</b>					
	<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 AL-REDm 670	31.5	µF - 450 VL	60	µF - 250 VL		
	AL-REDm 670M/L	50	µF - 450 VL	80	µF - 250 VL		
<b>8 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		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	11.5	11.5		
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	251	120	117.5	237.5	180	244	86.5	11			15.8	15.8
AL-REDm 660-6	AL-RED 660-6															17.6	19.6
AL-REDm 670-6	AL-RED 670-6															15.7	15.7
AL-REDm 660M-6	AL-RED 660M-6															17.5	19.4
AL-REDm 670M-6	AL-RED 670M-6															15.7	15.7
AL-REDm 650L-6	AL-RED 650L-6															15.7	15.7
AL-REDm 660L-6	AL-RED 660L-6			17.5	19.5												
AL-REDm 670L-6	AL-RED 670L-6																

(\*) 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

## 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