

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 **180 l/min** (10.8 m³/h)
- Maximum head **60 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **+40 °C**
- Max. working pressure:
 - **6 bar** for AL-RED 600-610-620 -4
AL-RED 600-610-620 -6
 - **8 bar** for AL-RED 650-660-670-650M-660M-670M -4
AL-RED 650-660-670-650M-660M-670M -6
- 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



EU REGULATION N. 547/2012

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. The pump should be installed in an enclosed environment or sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

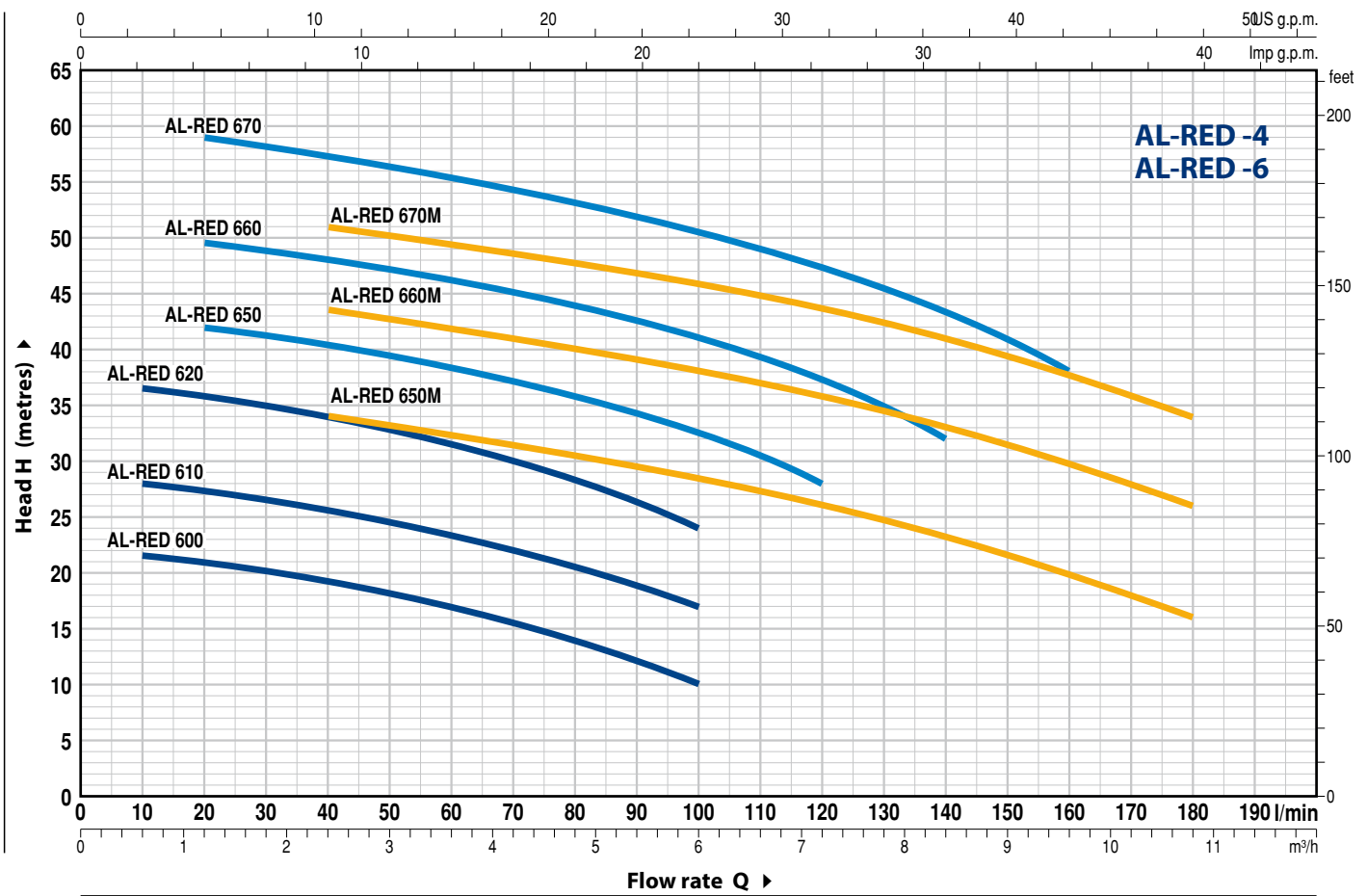
- AL-RED® Registered trade mark n. 0001575587

OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- IP X5 class protection for AL-RED 650-660-670-650M-660M-670M

CHARACTERISTIC CURVES AND PERFORMANCE DATA

60 Hz n = 3450 min⁻¹ HS = 0 m



MODEL		POWER (P ₂)			Q	H metres												
Single-phase	Three-phase	kW	HP	▲		m ³ /h	0	0.6	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8	
						l/min	0	10	20	40	60	80	100	120	140	160	180	
AL-REDm 600-4 AL-REDm 600-6	AL-RED 600-4 AL-RED 600-6	0.37	0.50		H metres		22	21.5	21	19.5	17	14	10					
AL-REDm 610-4 AL-REDm 610-6	AL-RED 610-4 AL-RED 610-6	0.60	0.85	IE2			28.5	28	27.5	25.5	23.5	20.5	17					
AL-REDm 620-4 AL-REDm 620-6	AL-RED 620-4 AL-RED 620-6	0.75	1	IE3			37	36.5	36	34	31.5	28.5	24					
AL-REDm 650-4 AL-REDm 650-6	AL-RED 650-4 AL-RED 650-6	1.1	1.5				43.5	-	42	40.5	38.5	36	32.5	28				
AL-REDm 660-4 AL-REDm 660-6	AL-RED 660-4 AL-RED 660-6	1.5	2	IE3			51	-	49.5	48	46	44	41	37	32			
AL-REDm 670-4 AL-REDm 670-6	AL-RED 670-4 AL-RED 670-6	2.2	3				60	-	59	57	55.5	53	50.5	47	43.5	38		
AL-REDm 650M-4 AL-REDm 650M-6	AL-RED 650M-4 AL-RED 650M-6	1.1	1.5				36	-	-	34	32.5	30.5	28.5	26	23	20	16	
AL-REDm 660M-4 AL-REDm 660M-6	AL-RED 660M-4 AL-RED 660M-6	1.5	2	IE3			46	-	-	43.5	42	40	38	36	33	30	26	
AL-REDm 670M-4 AL-REDm 670M-6	AL-RED 670M-4 AL-RED 670M-6	2.2	3				53	-	-	51	49.5	48	46	43.5	41	37.5	34	

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

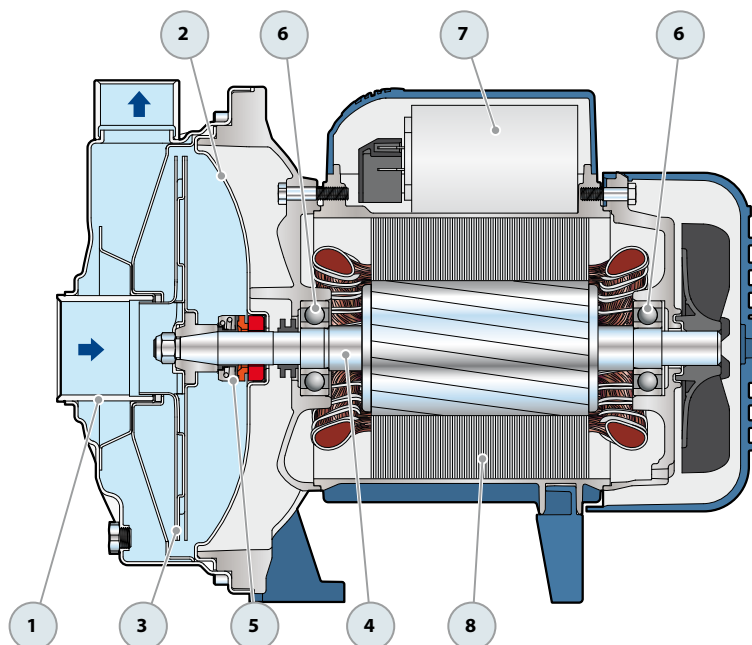
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

▲ Performance class of the three-phase motor (IEC 60034-30-1)

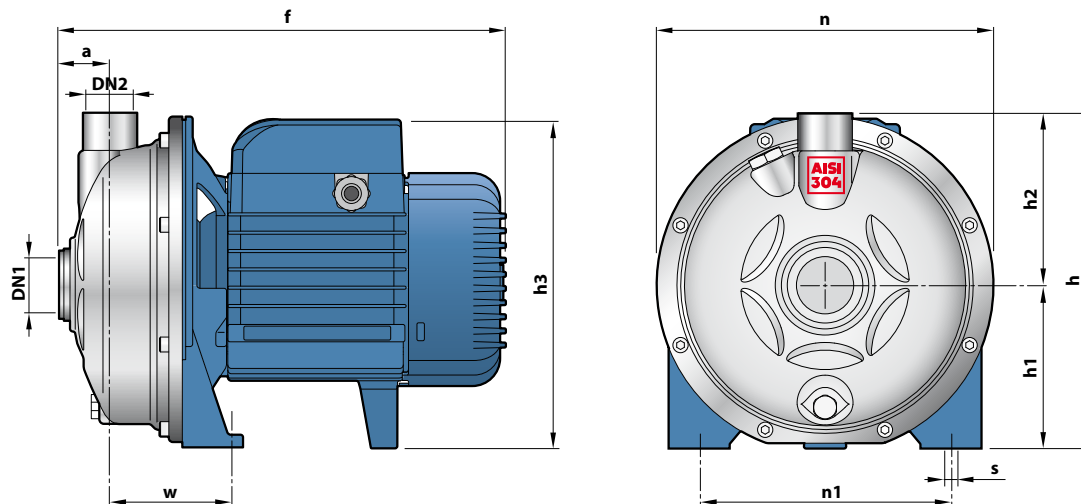
AL-RED -4

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	PUMP BODY	Stainless steel AISI 304						
2	BODY BACKPLATE	Stainless steel AISI 304						
3	IMPELLER	Stainless steel AISI 304						
4	MOTOR SHAFT	Stainless steel AISI 431						
5	MECHANICAL SEAL	Pump	Seal	Shaft	Materials			
		<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 600-4, 610-4	AR-12	Ø 12 mm	Ceramic	Graphite	NBR	AISI 304
		AL-RED 620-4	AR-14	Ø 14 mm	Ceramic	Graphite	NBR	AISI 304
		AL-RED 650-4, 650M-4 AL-RED 660-4, 660M-4 AL-RED 670-4, 670M-4	FN-18	Ø 18 mm	Graphite	Ceramic	NBR	AISI 316
6	BEARINGS	Pump	Model					
		AL-RED 600-4, 610-4	6201 ZZ / 6201 ZZ					
		AL-RED 620-4	6203 ZZ / 6203 ZZ					
		AL-RED 650-4, 650M-4 AL-RED 660-4, 660M-4 AL-RED 670-4, 670M-4	6204 ZZ / 6204 ZZ					
		7	CAPACITOR	Pump	Capacitance			
<i>Single-phase</i>	<i>(220 V)</i>			<i>(110 V or 127 V)</i>				
AL-REDm 600 -4	10			µF - 450 VL	25	µF - 250 VL		
AL-REDm 610 -4	14			µF - 450 VL	25	µF - 250 VL		
AL-REDm 620 -4	20			µF - 450 VL	60	µF - 300 VL		
AL-REDm 650-4, 650M-4	25			µF - 450 VL	60	µF - 250 VL		
AL-REDm 660-4, 660M-4 AL-REDm 670-4, 670M-4	31.5			µF - 450 VL	60	µF - 250 VL		
8	ELECTRIC MOTOR	AL-RED m: single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding. AL-RED : three-phase 220/380 V - 60 Hz or 220/440 V - 60 Hz.						
<p>⇒ The three-phase pumps are fitted with high performance motors up to P₂=0.60kW in class IE2 and from P₂=0.75 kW in class IE3 (IEC 60034-30-1)</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	n	n1	w	s	1~	3~
AL-REDm 600-4	AL-RED 600-4	1 1/4"	1"	31.5	260	185.5	92	93.5	183	182	120	68.5	9	5.6	6.4
AL-REDm 610-4	AL-RED 610-4													7.1	7.1
AL-REDm 620-4	AL-RED 620-4													9.8	9.8
AL-REDm 650-4	AL-RED 650-4			33.5	237.5	368	120	117.5	251	245	180	86.5	11	14.5	14.5
AL-REDm 660-4	AL-RED 660-4													15.7	15.7
AL-REDm 670-4	AL-RED 670-4													17.7	19.6
AL-REDm 650M-4	AL-RED 650M-4													15.8	14.4
AL-REDm 660M-4	AL-RED 660M-4													15.7	15.7
AL-REDm 670M-4	AL-RED 670M-4			17.5	19.4										

(*) h3=237 mm for single phase versions at 110 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	-	-
AL-REDm 610-4	4.2 A	8.5 A	-
AL-REDm 620-4	5.5 A	-	-
AL-REDm 650-4	7.8 A	-	-
AL-REDm 660-4	9.4 A	-	-
AL-REDm 670-4	-	-	-
AL-REDm 650M-4	6.7 A	-	-
AL-REDm 660M-4	9.8 A	-	A
AL-REDm 670M-4	12.2 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	-	-
AL-RED 610-4	2.8 A	1.6 A	-	-
AL-RED 620-4	4.2 A	2.4 A	3.5 A	1.9 A
AL-RED 650-4	6.6 A	3.8 A	-	-
AL-RED 660-4	7.5 A	4.3 A	6 A	3.5 A
AL-RED 670-4	8.8 A	5.1 A	7 A	4 A
AL-RED 650M-4	6.1 A	3.5 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

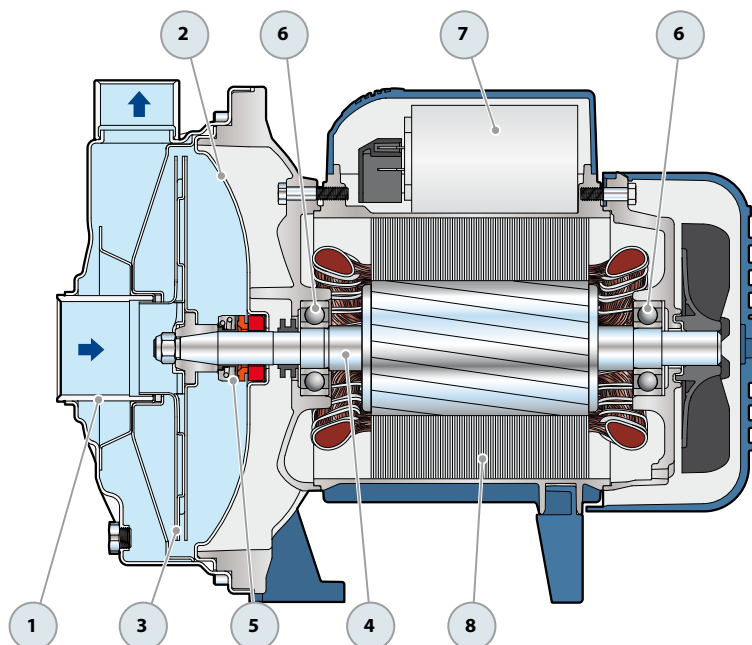
PALLETIZATION

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, 650M-4	AL-RED 650-4, 650M-4	45	63
AL-REDm 660-4, 660M-4	AL-RED 660-4, 660M-4	45	63
AL-REDm 670-4, 670M-4	AL-RED 670-4, 670M-4	45	63

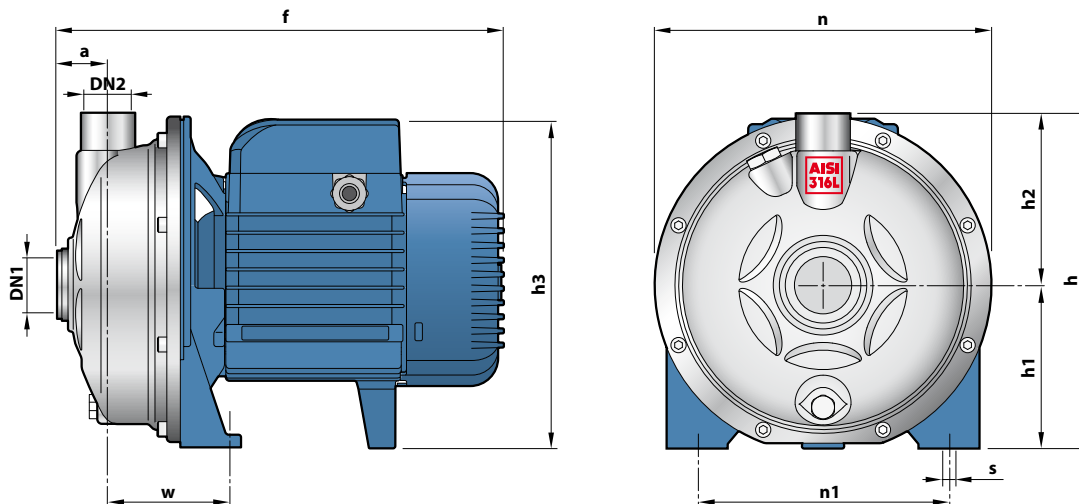
AL-RED -6

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	PUMP BODY	Stainless steel AISI 316L						
2	BODY BACKPLATE	Stainless steel AISI 316L						
3	IMPELLER	Stainless steel AISI 316L						
4	MOTOR SHAFT	Stainless steel AISI 316L						
5	MECHANICAL SEAL	Pump	Seal	Shaft	Materials			
		<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 600-6, 610-6	AR-12ST6	Ø 12 mm	Ceramic	Graphite	NBR	AISI 316
		AL-RED 620-6	AR-14ST6	Ø 14 mm	Ceramic	Graphite	NBR	AISI 316
		AL-RED 650-6, 650M-6 AL-RED 660-6, 660M-6 AL-RED 670-6, 670M-6	FN-18ST6	Ø 18 mm	Graphite	Ceramic	NBR	AISI 316
6	BEARINGS	Pump	Model					
		AL-RED 600-4, 610-6	6201 ZZ / 6201 ZZ					
		AL-RED 620-6	6203 ZZ / 6203 ZZ					
		AL-RED 650-6, 650M-6 AL-RED 660-6, 660M-6 AL-RED 670-6, 670M-6	6204 ZZ / 6204 ZZ					
		7	CAPACITOR	Pump	Capacitance			
<i>Single-phase</i>	<i>(220 V)</i>			<i>(110 V or 127 V)</i>				
AL-REDm 600 -6	10			µF - 450 VL	25	µF - 250 VL		
AL-REDm 610 -6	14			µF - 450 VL	25	µF - 250 VL		
AL-REDm 620 -6	20			µF - 450 VL	60	µF - 300 VL		
AL-REDm 650-6, 650M-6	25			µF - 450 VL	60	µF - 250 VL		
AL-REDm 660-6, 660M-6 AL-REDm 670-6, 670M-6	31.5 50			µF - 450 VL µF - 450 VL	60 80	µF - 250 VL µF - 250 VL		
8	ELECTRIC MOTOR	AL-RED m: single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding.						
		AL-RED : three-phase 220/380 V - 60 Hz or 220/440 V - 60 Hz.						
		<p>⇒ The three-phase pumps are fitted with high performance motors up to $P_2=0.60\text{kW}$ in class IE2 and from $P_2=0.75\text{ kW}$ in class IE3 (IEC 60034-30-1)</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	n	n1	w	s	1~	3~
AL-REDm 600-6	AL-RED 600-6	1 1/4"	1"	31.5	260	185.5	92	93.5	183	182	120	68.5	9	5.6	6.4
AL-REDm 610-6	AL-RED 610-6													7.1	7.1
AL-REDm 620-6	AL-RED 620-6			33.5	295	219	107	112	218 *	221	165	80.5	9.5	9.8	9.8
AL-REDm 650-6	AL-RED 650-6													14.5	14.5
AL-REDm 660-6	AL-RED 660-6			33.5	368/388	237.5	120	117.5	251	245	180	86.5	11	15.7	15.7
AL-REDm 670-6	AL-RED 670-6													17.7	19.6
AL-REDm 650M-6	AL-RED 650M-6													15.8	14.4
AL-REDm 660M-6	AL-RED 660M-6													15.7	15.7
AL-REDm 670M-6	AL-RED 670M-6			17.5	19.4										

(*) h3=237 mm for single phase versions at 110 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	-	-
AL-REDm 610-6	4.2 A	8.5 A	-
AL-REDm 620-6	5.5 A	-	-
AL-REDm 650-6	7.8 A	-	-
AL-REDm 660-6	9.4 A	-	-
AL-REDm 670-6	-	-	-
AL-REDm 650M-6	6.7 A	-	-
AL-REDm 660M-6	9.8 A	-	A
AL-REDm 670M-6	12.2 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	-	-
AL-RED 610 -6	2.8 A	1.6 A	-	-
AL-RED 620 -6	4.2 A	2.4 A	3.5 A	1.9 A
AL-RED 650 -6	6.6 A	3.8 A	-	-
AL-RED 660 -6	7.5 A	4.3 A	6 A	3.5 A
AL-RED 670 -6	8.8 A	5.1 A	7 A	4 A
AL-RED 650M -6	6.1 A	3.5 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

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, 650M-6	AL-RED 650-6, 650M-6	45	63
AL-REDm 660-6, 660M-6	AL-RED 660-6, 660M-6	45	63
AL-REDm 670-6, 670M-6	AL-RED 670-6, 670M-6	45	63

AL-RED

Stainless steel centrifugal pump

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



PERFORMANCE RANGE

- Maximum flow rate **180 l/min** (10.8 m³/h)
- Maximum head **32 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+40 °C**
- Max. working pressure **4 bar**
- 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
ISO 14001: ENVIRONMENT

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 this centrifugal pump is recommended for use in domestic, agricultural and industrial applications. All the components in contact with the pumped liquid are in stainless steel AISI 304 thus guaranteeing complete hygiene and maximum resistance against corrosion. The pump should be installed in an enclosed environment or sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

- Registered Trade Mark n. 0001575587 AL-RED®

OPTIONS AVAILABLE ON REQUEST

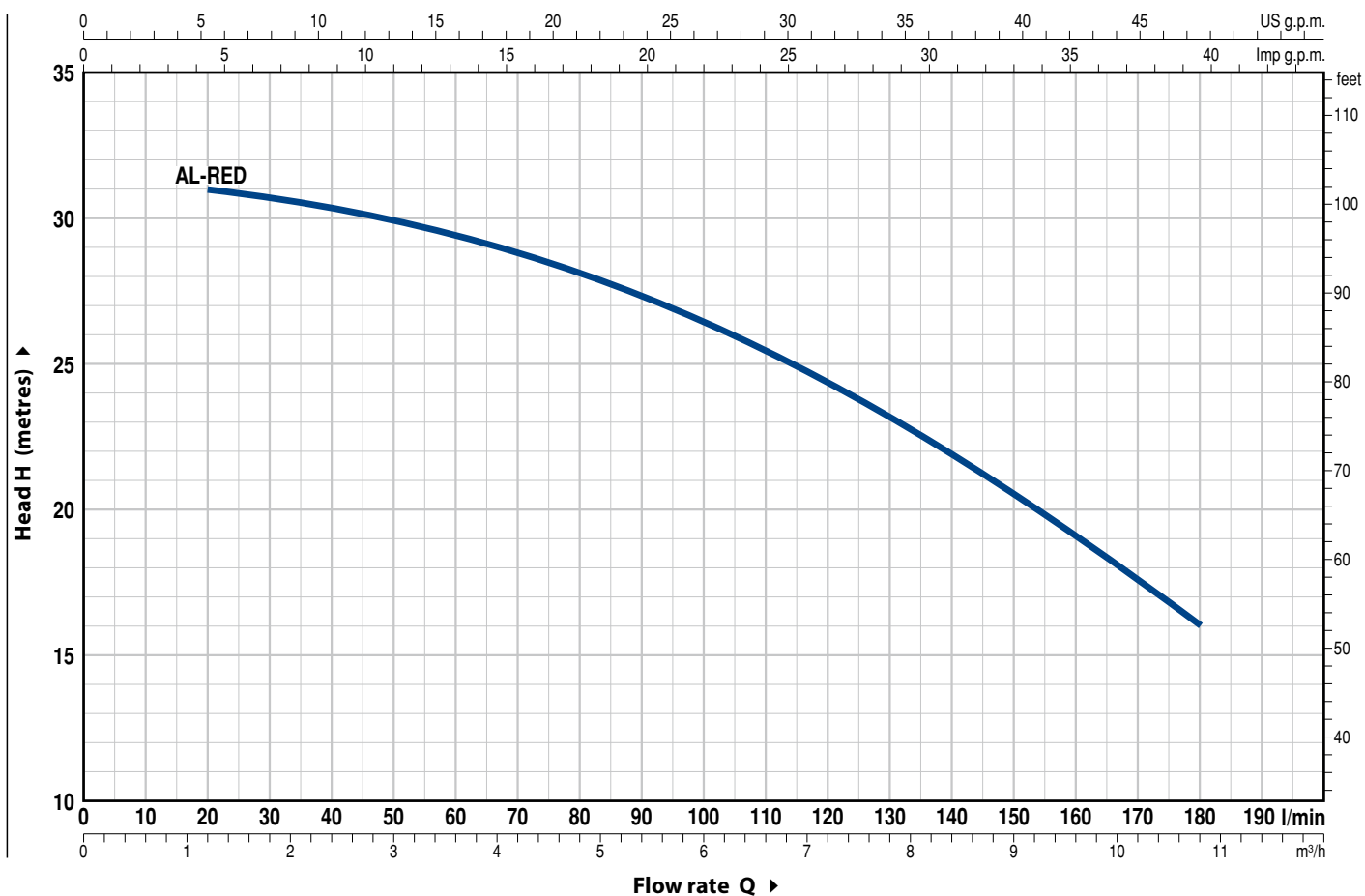
- Pump body with NPT ANSI B 1.20.1 threaded ports
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel pump shaft
- Other voltages
- IP X5 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

60 Hz n= 3450 rpm HS= 0 m



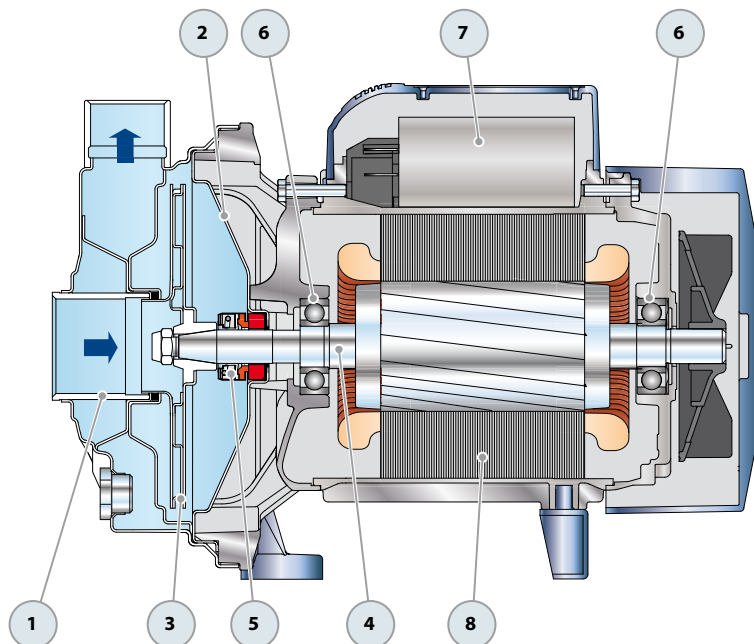
MODEL		POWER (P ₂)		Q										
Single-phase	Three-phase	kW	HP		m ³ /h	0	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6
				l/min	0	20	40	60	80	100	120	140	160	180
AL-RED 135m	AL-RED 135	0.75	1	H metres	32	31	30.5	29.5	28.1	26.4	24.4	22	19.3	16

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

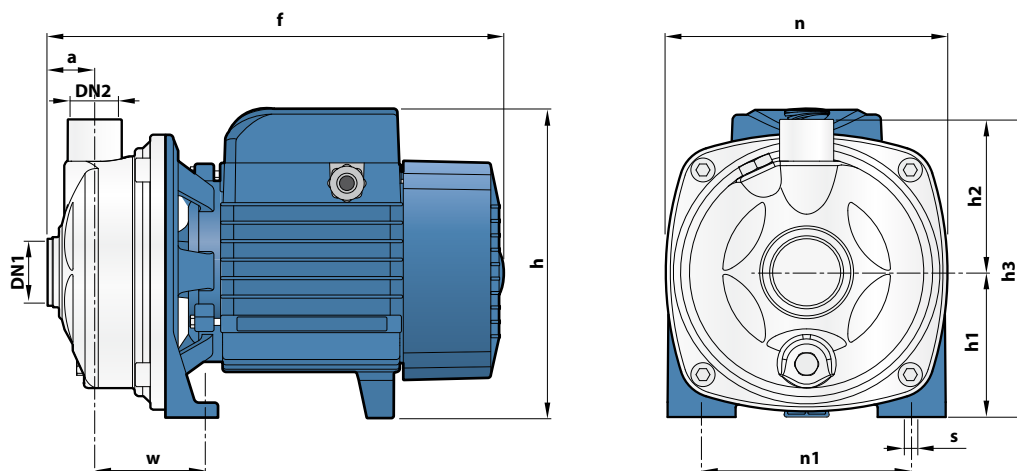
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	PUMP BODY	Stainless steel AISI 304 complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLER	Stainless steel AISI 304				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>
		AR-14	Ø 14 mm	Ceramic	Graphite	NBR
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	Capacitance				
		<i>(220 V)</i>	<i>(110 V or 127 V)</i>			
		25 µF - 450 VL	60 µF - 300 VL			
8	ELECTRIC MOTOR	<p>AL-RED 135m: single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding. AL-RED 135: three-phase 220/380 V - 60 Hz or 220/440 V - 60 Hz.</p> <p>➔ The three-phase pump is fitted with a high performance motor in class IE2 (IEC 60034-30)</p> <ul style="list-style-type: none"> - 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	n	n1	w	s	1~	3~
AL-RED 135m	AL-RED 135	1¼"	1"	31	296	206 *	97	103	200	186	135	73.5	10	9.1	9.0

(*) h=225 mm for single phase versions at 110V or 127 V

ABSORPTION

MODEL	VOLTAGE		
Single-phase	220 V	110 V	127 V
AL-RED 135m	7.0 A	13.2 A	12.3 A

MODEL	VOLTAGE			
Three-phase	220 V	380 V	220 V	440 V
AL-RED 135	3.5 A	2.0 A	4.2 A	2.5 A