

## Pumps with peripheral impeller

 Clean water

 Domestic use



### PERFORMANCE RANGE

- Flow rate up to **90 l/min** (5.4 m<sup>3</sup>/h)
- Head up to **100 m**

### APPLICATION LIMITS

- Manometric suction lift up to **8 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+40 °C**  
(**+50 °C** for PQ 60 and PQ61)
- Max. working pressure:
  - **6 bar** for PQ 60, PQ 61, PQ 65
  - **7 bar** for PQ 80
  - **10 bar** for PQ 90, PQ 100, PQ 200, PQ 300
- 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 that does not contain abrasive particles and with liquids that are not chemically aggressive towards the materials from which the pump is made.

The hydraulic characteristics of these pumps, coupled with their compactness, makes them suitable for use in both domestic and industrial applications.

Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

### PATENTS - TRADE MARKS - MODELS

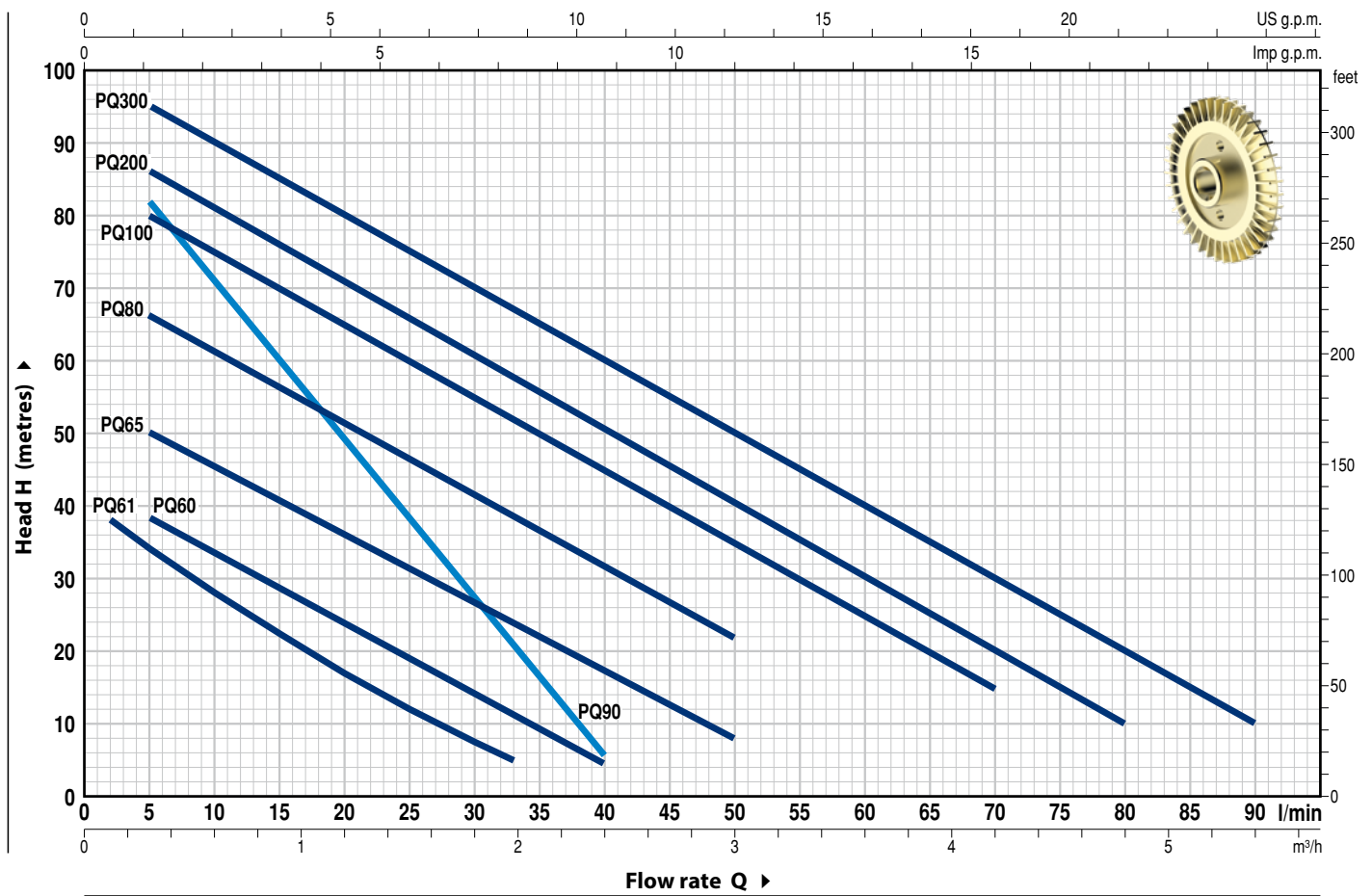
- Motor bracket: patent n. IT1243605
- Registered EU Design n. 002146548
- **PQm 60** Registered Trade Mark n. 0001520591

### OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency
- EN 10088-3 - 1.4401 (AISI 316) stainless steel pump shaft for PQ61
- IP X5 class protection for PQ 80-90-100-200-300

### CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 min<sup>-1</sup> HS= 0 m





MODEL		POWER (P <sub>2</sub> )			Q	Flow rate																		
Single-phase	Three-phase	kW	HP	▲		0	0.12	0.3	0.6	0.9	1.2	1.5	1.8	1.98	2.1	2.4	3.0	3.6	4.2	4.8	5.4			
						0	2	5	10	15	20	25	30	33	35	40	50	60	70	80	90			
PQm 60	PQ 60	0.37	0.50	IE2	H metres	40	-	38	33.5	29	24	19.5	15	11	10	5								
PQm 61	PQ 61	0.37	0.50			40.5	38	34	28	22.3	17	12.1	7.5	5										
PQm 65	PQ 65	0.55	0.75			55	-	50	45.5	40.5	36	31	27	24	22	17	8							
PQm 80	PQ 80	0.75	1	70		-	66	61	56	51	46	41	38.5	36.5	31	22								
PQm 90	PQ 90	0.75	1	90		-	82	71	60	49	38	27	21	17	5									
PQm 100	PQ 100	1.1	1.5	IE3		85	-	80	75	70	65	60	55	52	50	45	35	25	15					
PQm 200	PQ 200	1.5	2			90	-	86	81	76	71	65.5	60	58	55	50	40	30	20	10				
PQm 300	PQ 300	2.2	3			100	-	95	90	85	80	75	70	67	65	60	50	40	30	20	10			

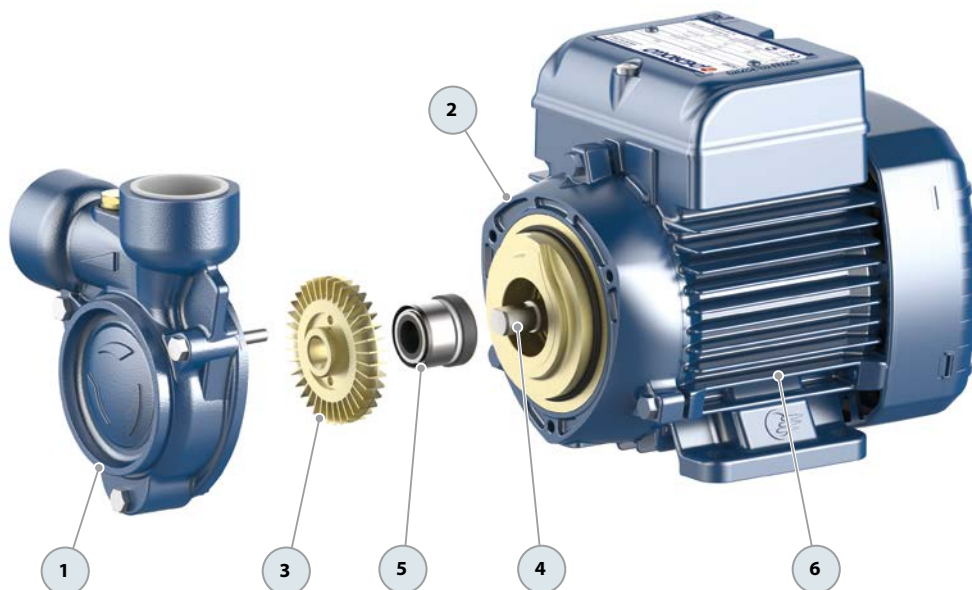
Q = Flow rate H = Total manometric head HS = Suction height

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

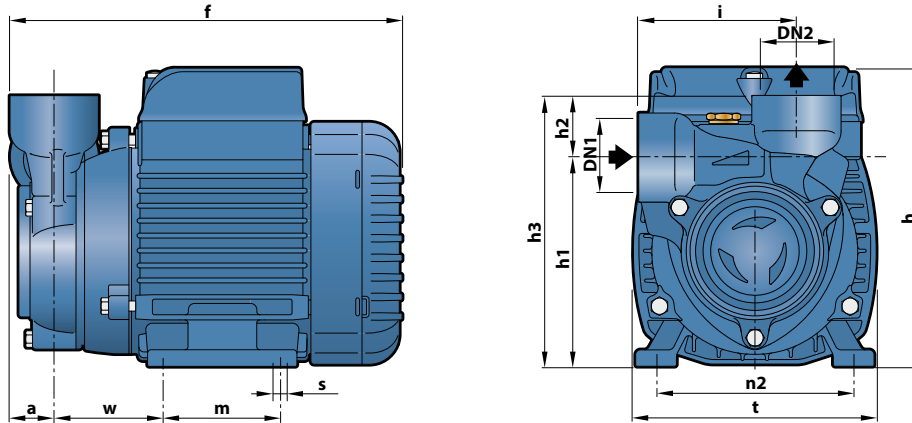
▲ Three-phase motor efficiency class (IEC 60034-30-1)

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Cast iron with threaded ports in compliance with ISO 228/1 Cast iron with anti-block treatment and threaded ports in compliance with ISO 228/1 for PQ 61					
<b>2 MOTOR BRACKET</b>	Aluminium with brass insert (patented), reduces the risk of impeller seizure					
<b>3 IMPELLER</b>	Brass with peripheral radial vanes					
<b>4 MOTOR SHAFT</b>	Stainless steel AISI 431 (EN 10088-3 - 1.4104 for PQ 60, PQ 61, PQ 65)					
<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>
	<b>PQ 60-61-65-80</b>	<b>AR-12</b>	<b>Ø 12 mm</b>	Ceramic	Graphite	NBR
	<b>PQ 90</b>	<b>ST1-12</b>	<b>Ø 12 mm</b>	Silicon carbide	Graphite	NBR
<b>PQ 100-200-300</b>	<b>FN-14</b>	<b>Ø 14 mm</b>	Graphite	Ceramic	NBR	
<b>- BEARINGS</b>	<b>Pump</b>	<b>Model</b>				
	<b>PQ 60-61-65</b>	<b>6201 ZZ / 6201 ZZ</b>				
	<b>PQ 80-90</b>	<b>6203 ZZ / 6203 ZZ</b>				
	<b>PQ 100-200-300</b>	<b>6204 ZZ / 6204 ZZ</b>				
<b>- CAPACITOR</b>	<b>EN 60252-1/A1</b>					
<b>6 ELECTRIC MOTOR</b>	<p><b>PQm:</b> single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding.  <b>PQ:</b> three-phase 230/400 V - 50 Hz.</p> <p>➔ <b>The three-phase pumps are fitted with high performance motors up to P<sub>2</sub>=0.55 kW in class IE2 and from P<sub>2</sub>=0.60 kW in class IE3 (IEC 60034-30-1)</b></p> <p>- Insulation: class F          - Protection: IP X4</p>					



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm													kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	i	m	t	n2	w	s	1~	3~	
PQm 60	PQ 60	1"	1"	22	192	145	101	30	131	76	55	118	94-100	53	7	4.8	4.8	
PQm 61	PQ 61	½"	½"	21	191			32.5	133.5	75.5						4.9	4.9	
PQm 65	PQ 65	1"	1"	22	220	152	113	30	143	78	80	120	100	62.5	7	6.9	6.2	
PQm 80	PQ 80				256	181 *	121	151	83	90	142	112	9.7			9.7		
PQm 90	PQ 90	¾"	¾"	29	322.5	211	140	27	153	84	100	164	125	95	9	9.9	8.9	
PQm 100	PQ 100	342.5	14.1													14.0		
PQm 200	PQ 200	1"	1"	29	342.5	211	140	28	168	88	100	164	125	95	9	15.2	15.2	
PQm 300	PQ 300	—	17.8															

(\*) h=199 mm for single-phase versions at 110 V

## ABSORPTION

MODEL	VOLTAGE		
Single-phase	230 V	240 V	110 V
PQm 60	2.6 A	2.4 A	5.2 A
PQm 61	2.3 A	2.2 A	4.6 A
PQm 65	3.7 A	3.5 A	7.4 A
PQm 80	5.2 A	5.0 A	10.5 A
PQm 90	5.6 A	5.1 A	11.5 A
PQm 100	9.0 A	8.6 A	18.0 A
PQm 200	12.0 A	11.5 A	24.0 A
PQm 300	13.0 A	12.5 A	—

MODEL	VOLTAGE				
Three-phase	230 V	400 V	690 V	240 V	415 V
PQ 60	2.0 A	1.15 A	0.7 A	1.9 A	1.1 A
PQ 61	2.0 A	1.15 A	0.7 A	1.9 A	1.1 A
PQ 65	3.0 A	1.7 A	1.0 A	2.8 A	1.6 A
PQ 80	3.8 A	2.2 A	1.3 A	3.6 A	2.1 A
PQ 90	4.2 A	2.4 A	1.4 A	3.8 A	2.2 A
PQ 100	6.2 A	3.6 A	2.1 A	5.9 A	3.4 A
PQ 200	8.3 A	4.8 A	2.8 A	7.9 A	4.6 A
PQ 300	9.0 A	5.2 A	3.0 A	8.7 A	5.0 A

## CAPACITORS

MODEL	CAPACITANCE	
Single-phase	(230 V or 240 V)	(110 V)
PQm 60	10 µF - 450 VL	25 µF - 250 VL
PQm 61	10 µF - 450 VL	25 µF - 250 VL
PQm 65	14 µF - 450 VL	25 µF - 250 VL
PQm 80	20 µF - 450 VL	60 µF - 300 VL
PQm 90	20 µF - 450 VL	60 µF - 300 VL
PQm 100	31.5 µF - 450 VL	60 µF - 250 VL
PQm 200	45 µF - 450 VL	80 µF - 250 VL
PQm 300	50 µF - 450 VL	—

## PALLETIZATION

MODEL		GROUPAGE	CONTAINER
Single-phase	Three-phase	n. pumps	n. pumps
PQm 60	PQ 60	256	352
PQm 61	PQ 61	238	306
PQm 65	PQ 65	210	270
PQm 80	PQ 80	102	170
PQm 90	PQ 90	102	170
PQm 100	PQ 100	72	96
PQm 200	PQ 200	72	96
PQm 300	PQ 300	72	270