



## 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)
- Max. working pressure:
  - **6 bar** for PQ 60, PQ 65
  - **7 bar** for PQ 70, 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

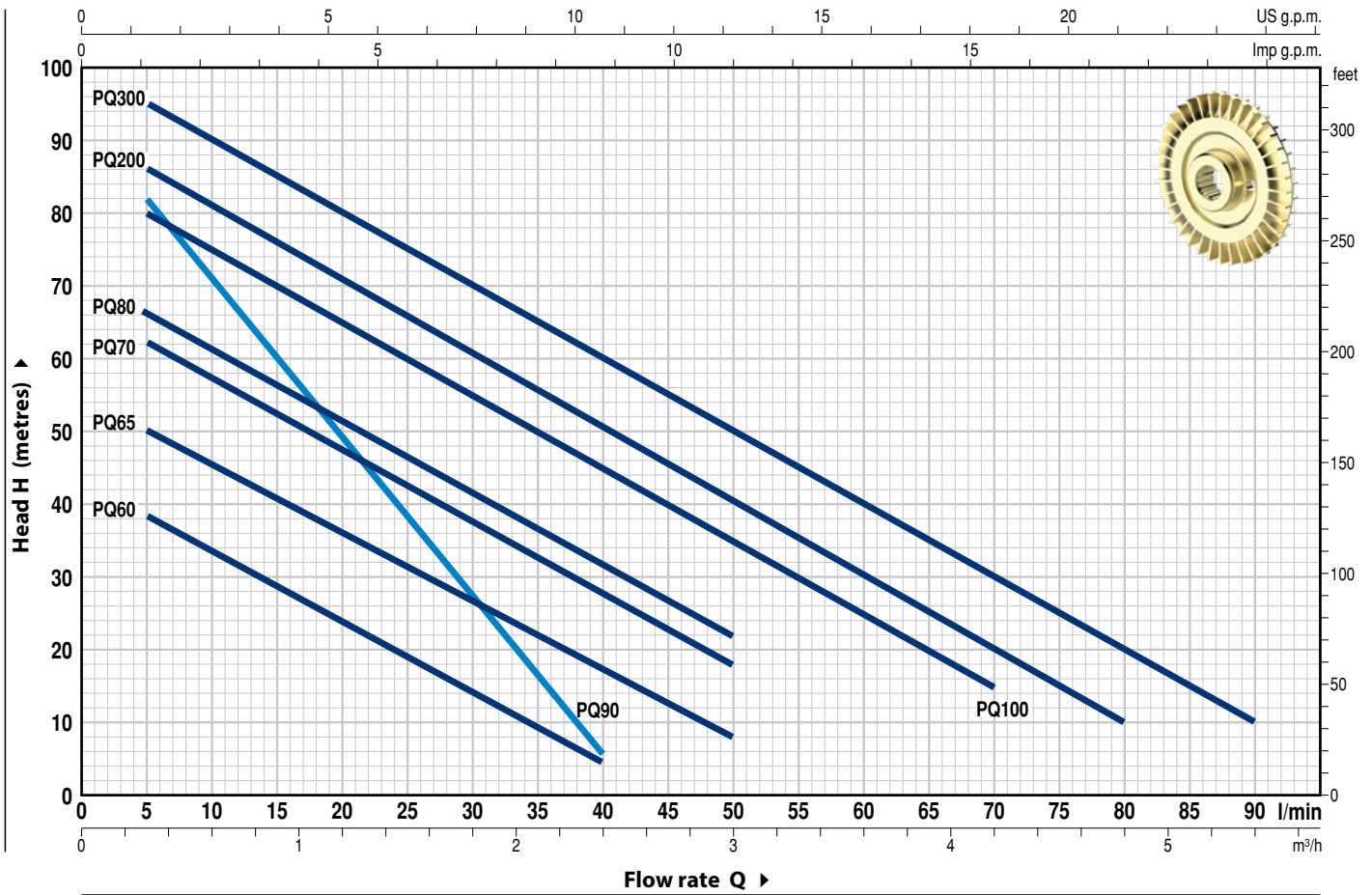
- Motor bracket: patent n. IT1243605
- Shaft: patent n 0000275945 (PQ60, PQ65)
- Registered EU Design n. 002146548
- **PQm 60**® Registered Trade Mark n. 0001520591

## OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP X5 class protection for PQ 70-80-90-100-200-300

### 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	▲		m <sup>3</sup> /h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	4.2	4.8	5.4		
					l/min	0	5	10	15	20	25	30	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	10	5								
PQm 65	PQ 65	0.55	0.75			55	50	45.5	40.5	36	31	27	22	17	8							
PQm 70	PQ 70	0.60	0.85	65		62	57	52	47	42	37	32	27	18								
PQm 80	PQ 80	0.75	1	70		66	61	56	51	46	41	36.5	31	22								
PQm 90	PQ 90	0.75	1	90		82	71	60	49	38	27	17	5									
PQm 100	PQ 100	1.1	1.5	85		80	75	70	65	60	55	50	45	35	25	15						
PQm 200	PQ 200	1.5	2	90		86	81	76	71	65.5	60	55	50	40	30	20	10					
PQm 300	PQ 300	2.2	3	100		95	90	85	80	75	70	65	60	50	40	30	20	10				

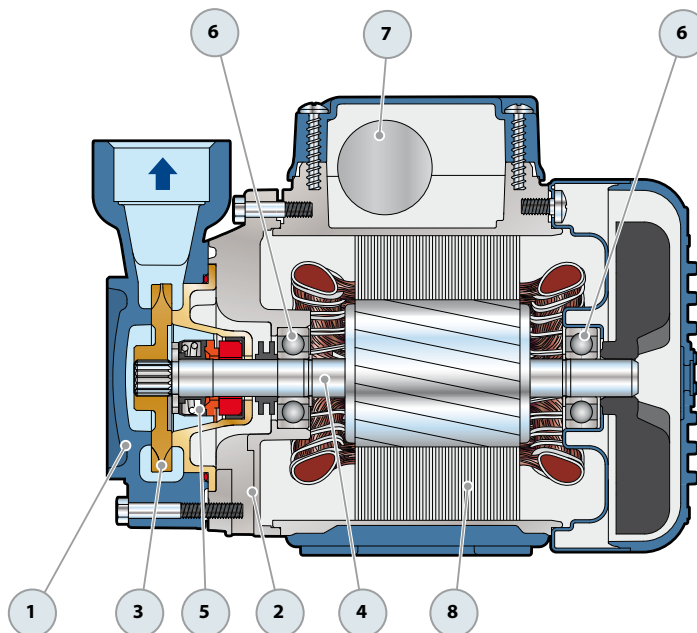
Q = Flow rate H = Total manometric head HS = Suction height

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

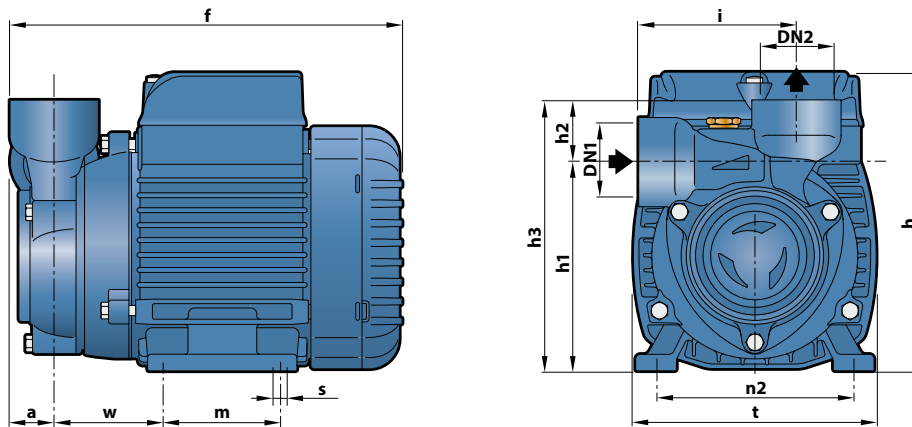
▲ Three-phase motor efficiency class (IEC 60034-30-1)

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Cast iron with threaded ports in compliance with ISO 228/1					
<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 65)					
<b>5 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>
	<b>PQ 60-65</b>	<b>AR-12</b>	<b>Ø 12 mm</b>	Ceramic	Graphite	NBR
	<b>PQ 70-80-90</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>6 BEARINGS</b>	<i>Pump</i>	<i>Model</i>				
	<b>PQ 60-65</b>	<b>6201 ZZ / 6201 ZZ</b>				
	<b>PQ 70-80-90</b>	<b>6203 ZZ / 6203 ZZ</b>				
	<b>PQ 100-200-300</b>	<b>6204 ZZ / 6204 ZZ</b>				
<b>7 CAPACITOR</b>	<i>Pump</i>	<i>Capacitance</i>				
	<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>		
	<b>PQm 60</b>	<b>10</b> µF - 450 VL	<b>25</b> µF - 250 VL			
	<b>PQm 65</b>	<b>14</b> µF - 450 VL	<b>25</b> µF - 250 VL			
	<b>PQm 70</b>	<b>16</b> µF - 450 VL	<b>60</b> µF - 300 VL			
	<b>PQm 80</b>	<b>20</b> µF - 450 VL	<b>60</b> µF - 300 VL			
	<b>PQm 90</b>	<b>20</b> µF - 450 VL	<b>60</b> µF - 300 VL			
	<b>PQm 100</b>	<b>31.5</b> µF - 450 VL	<b>60</b> µF - 250 VL			
	<b>PQm 200</b>	<b>45</b> µF - 450 VL	<b>80</b> µF - 250 VL			
	<b>PQm 300</b>	<b>50</b> µF - 450 VL	-			
<b>8 ELECTRIC MOTOR</b>	<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>⇒ <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> <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	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 65	PQ 65				220	152	113		143	78	80	120	100			6.9	6.2	
PQm 70	PQ 70				256	181 *	121		151	83	90	142	112			62.5	9.7	9.8
PQm 80	PQ 80				126		27		153	84	9.9	8.9						
PQm 90	PQ 90	¾"	¾"	29	322.5	211	140	28	168	88	100	164	125	95	9	14.1	14.0	
PQm 100	PQ 100	1"	1"													342.5	15.2	15.2
PQm 200	PQ 200															—	17.8	
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 65	3.7 A	3.5 A	7.4 A
PQm 70	5.2 A	4.8 A	10.4 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	—	—	—

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 65	3.0 A	1.7 A	1.0 A	2.8 A	1.6 A
PQ 70	3.8 A	2.2 A	1.3 A	3.3 A	1.9 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

## PALLETIZATION

MODEL		GROUPAGE	CONTAINER
Single-phase	Three-phase	n. pumps	n. pumps
PQm 60	PQ 60	256	352
PQm 65	PQ 65	210	270
PQm 70	PQ 70	102	170
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