

## Pumps with peripheral impeller

-  Clean water
-  Industrial use
-  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**  
(**+45 °C** for PQ 60, PQ 60-Bs)
- Max. working pressure:
  - **6 bar** for PQ 60-65
  - **10 bar** for PQ 70-80-81-90-100-200-300  
PQ 60Bs-65Bs-81Bs
- 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 AND SAFETY



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

### PATENTS - TRADE MARKS - MODELS

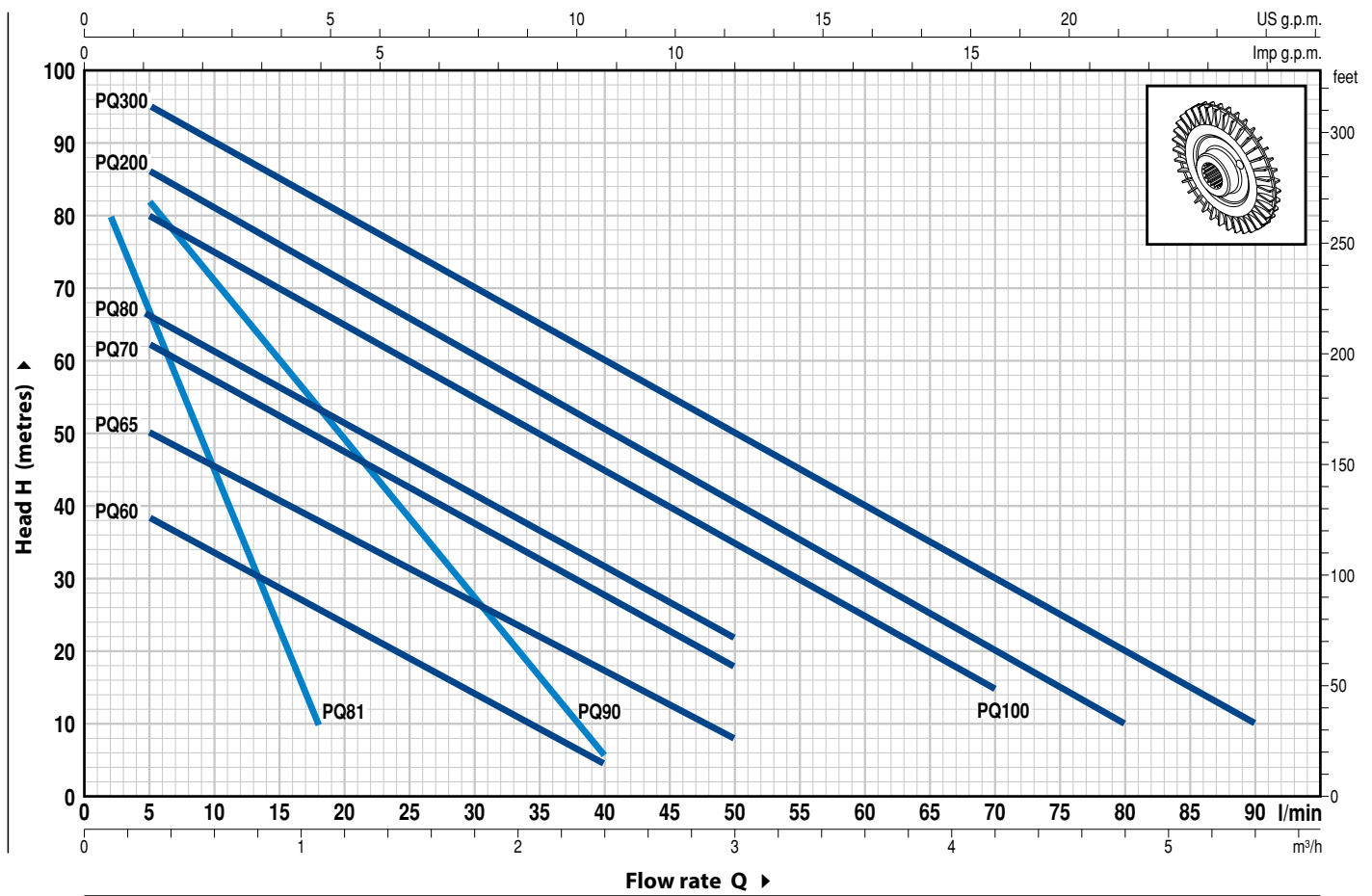
- Registered Trade Mark n. 0001520591 PQm 60<sup>®</sup>
- Motor bracket: patent n. IT1243605
- Shaft: patent n. 0000275945 (PQ60, PQ65)
- Registered EU Design n. 002146548

### OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel pump shaft
- 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 rpm 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	H metres	40	38	33.5	29	24	19.5	15	10	5								
PQm 65	PQ 65	0.50	0.70		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				
-	PQ 300	2.2	3		100	95	90	85	80	75	70	65	60	50	40	30	20	10			
PQm 60-Bs	PQ 60-Bs	0.37	0.50		40	38	33.5	29	24	19.5	15	10	5								
PQm 65-Bs	PQ 65-Bs	0.50	0.70		55	50	45.5	40.5	36	31	27	22	17	8							

⇒ Bs= version with brass pump body

MODEL		POWER (P <sub>2</sub> )		Q	Flow rate										
Single-phase	Three-phase	kW	HP		m <sup>3</sup> /h	0	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.08
				l/min	0	2	4	6	8	10	12	14	16	18	
PQm 81	PQ 81	0.50	0.70	H metres	90	80	71	63	54	45	37	28	19	10	
PQm 81-Bs	PQ 81-Bs	0.50	0.70		90	80	71	63	54	45	37	28	19	10	

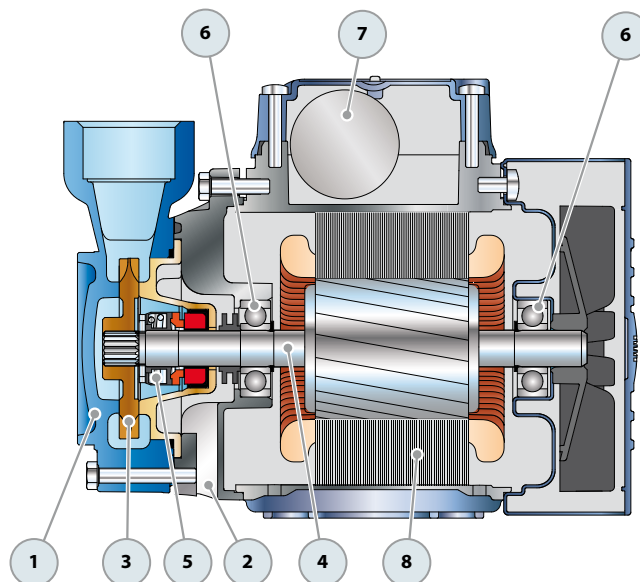
⇒ Bs= version with brass pump body

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

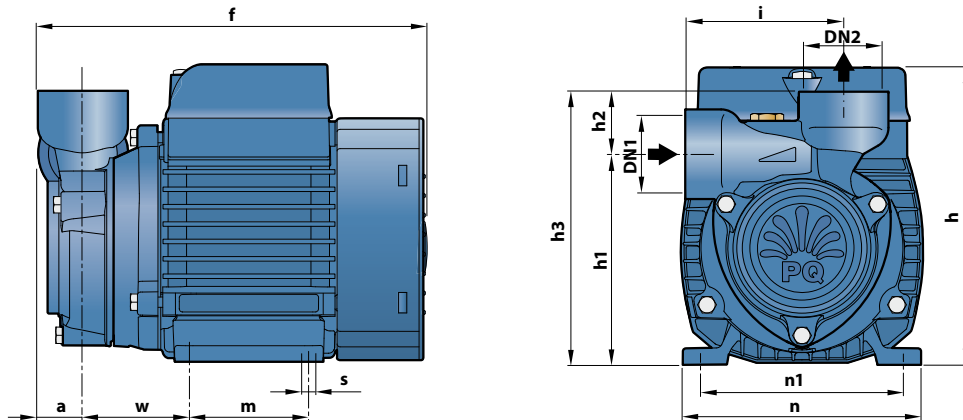
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Cast iron with an Epoxy Electro Coating Treatment (brass for PQ-Bs), 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 EN 10088-3 - 1.4104					
<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 60-65</b>	<b>AR-12</b>	<b>Ø 12 mm</b>	Ceramic	Graphite	NBR
	<b>PQ 70-80-81-90</b> <b>PQ 60Bs-65Bs-81Bs</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>	<b>Pump</b>	<b>Model</b>				
	<b>PQ 60-65-81</b> <b>PQ 60Bs-65Bs-81Bs</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>	<b>Pump</b>	<b>Capacitance</b>				
	<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>		
	<b>PQm 60 - 60Bs</b>	<b>10</b> µF - 450 VL	<b>25</b> µF - 250 VL			
	<b>PQm 65 - 65Bs</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 81 - 81Bs</b>	<b>14</b> µF - 450 VL	<b>25</b> µF - 250 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>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 P2=1.1kW in class IE2 and from P2=1.5kW in class IE3 (IEC 60034-30)</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	n	n1	w	s	1~	3~				
PQm 60°	PQ 60°	1"	1"	22	190	145	101	30	131	76	55	118	93-100	53	7			5.1	5.1		
PQm 60-Bs	PQ 60-Bs																	5.4	5.4		
PQm 65	PQ 65																	7.0	6.2		
PQm 65-Bs	PQ 65-Bs																	7.1	6.4		
PQm 70	PQ 70																	9.7	9.6		
PQm 80	PQ 80	1/2"	1/2"	18	218	152	119	22	141	71	80	120	100	56					9.7	9.6	
PQm 81	PQ 81																		7.0	6.3	
PQm 81-Bs	PQ 81-Bs	3/4"	3/4"	22	255	180	126	27	153	84	90	138	112	62						6.9	6.2
PQm 90	PQ 90																			9.9	9.8
PQm 100	PQ 100																			14.1	12.2
PQm 200	PQ 200	1"	1"	25	318	212	140	30	170	89	100	164	125	85	9					15.2	14.1
-	PQ 300																			-	15.2

## ABSORPTION

MODEL	VOLTAGE		
	230 V	240 V	110 V
<b>Single-phase</b>			
PQm 60° - PQm 60-Bs	2.6 A	2.4 A	5.2 A
PQm 65 - PQm 65-Bs	3.7 A	3.4 A	7.4 A
PQm 70	5.2 A	4.8 A	10.8 A
PQm 80	5.2 A	4.8 A	10.5 A
PQm 81 - PQm 81-Bs	3.4 A	2.7 A	5.8 A
PQm 90	5.6 A	5.1 A	11.5 A
PQm 100	9.0 A	8.2 A	18.0 A
PQm 200	12.0 A	11.0 A	24.0 A

MODEL	VOLTAGE				
	230 V	400 V	690 V	240 V	415 V
<b>Three-phase</b>					
PQ 60° - PQ 60-Bs	2.0 A	1.15 A	-	1.9 A	1.1 A
PQ 65 - PQ 65-Bs	3.0 A	1.7 A	-	2.8 A	1.6 A
PQ 70	3.8 A	2.2 A	-	3.3 A	1.9 A
PQ 80	3.8 A	2.2 A	-	3.3 A	1.9 A
PQ 81 - PQ 81-Bs	2.2 A	1.3 A	-	2.0 A	1.15 A
PQ 90	4.2 A	2.4 A	-	3.8 A	2.2 A
PQ 100	6.3 A	3.6 A	2.05 A	5.7 A	3.3 A
PQ 200	7.6 A	4.4 A	2.5 A	7.0 A	4.0 A
PQ 300	9.3 A	5.4 A	3.15 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 60-Bs	PQ 60-Bs	238	306
PQm 65	PQ 65	200	240
PQm 65-Bs	PQ 65-Bs	200	240
PQm 70	PQ 70	102	170
PQm 80	PQ 80	102	170
PQm 81	PQ 81	200	240
PQm 81-Bs	PQ 81-Bs	200	240
PQm 90	PQ 90	102	170
PQm 100	PQ 100	72	96
PQm 200	PQ 200	72	96
-	PQ 300	72	96