Pumps with peripheral impeller

Clean water

Industrial use

Domestic use

PERFORMANCE RANGE

- Flow rate up to **90 l/min** (5.4 m^3/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 60-65
  – **10 bar** for PQ 70-80-90-100-200-300
- 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

CE

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

PATENTS - TRADE MARKS - MODELS

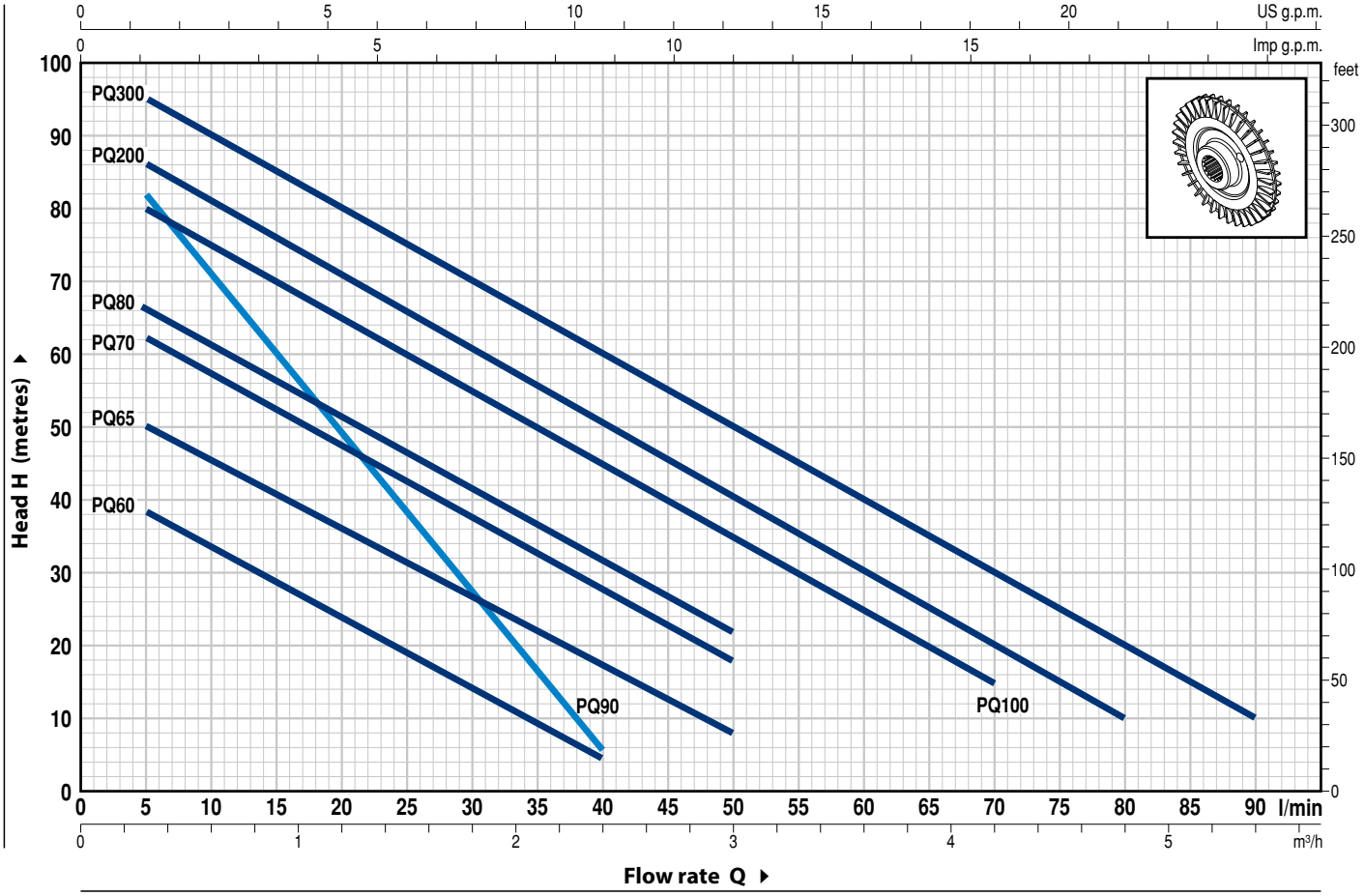
- Registered Trade Mark n. 0001520591 PQm 60®
- Motor bracket: patent n. IT1243605
- Shaft: patent n. 0000275945 (PQ60, PQ65)
- Registered EU Design n. 002146548

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 min^{-1}** HS= 0 m



MODEL		POWER (P2)			Q	m³/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
Single-phase	**Three-phase**	**kW**	**HP**	▲		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	**IE3**			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

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

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS
1	**PUMP BODY**	Cast iron with an Epoxy Electro Coating Treatment (brass for PQ-Bs), with threaded ports in compliance with ISO 228/1
2	**MOTOR BRACKET**	Aluminium with brass insert (patented), reduces the risk of impeller seizure
3	**IMPELLER**	Brass with peripheral radial vanes
4	**MOTOR SHAFT**	Stainless steel EN 10088-3 - 1.4104

5 MECHANICAL SEAL

Pump	*Seal*	*Shaft*		*Materials*	
Model	*Model*	*Diameter*	*Stationary ring*	*Rotational ring*	*Elastomer*
PQ 60-65	**AR-12**	**Ø 12** mm	Ceramic	Graphite	NBR
PQ 70-80-90	**ST1-12**	**Ø 12** mm	Silicon carbide	Graphite	NBR
PQ 100-200-300	**FN-14**	**Ø 14** mm	Graphite	Ceramic	NBR

6 BEARINGS

Pump	*Model*
PQ 60-65	**6201 ZZ / 6201 ZZ**
PQ 70-80-90	**6203 ZZ / 6203 ZZ**
PQ 100-200-300	**6204 ZZ / 6204 ZZ**

7 CAPACITOR

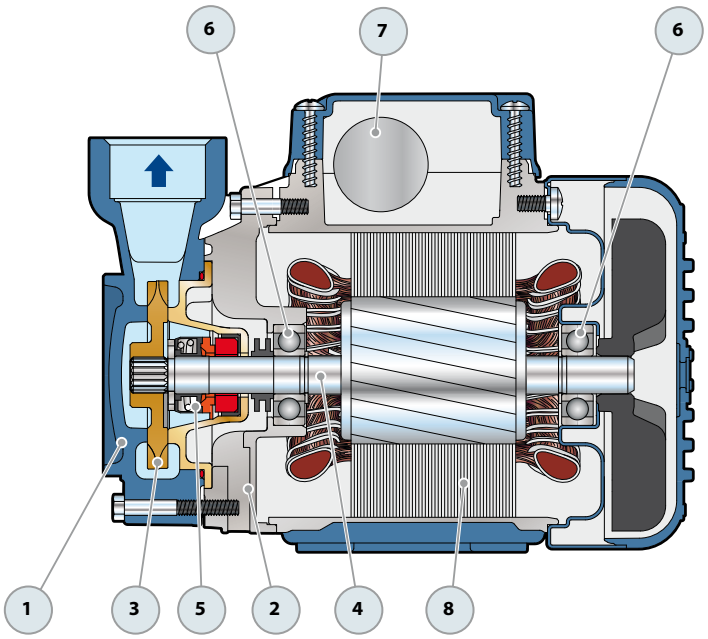
Pump	*Capacitance*	
Single-phase	*(220-230 V or 240 V)*	*(110 V)*
PQm 60	**10** µF - 450 VL	**25** µF - 250 VL
PQm 65	**14** µF - 450 VL	**25** µF - 250 VL
PQm 70	**16** µF - 450 VL	**60** µF - 300 VL
PQm 80	**20** µF - 450 VL	**60** µF - 300 VL
PQm 90	**20** µF - 450 VL	**60** µF - 300 VL
PQm 100	**31.5** µF - 450 VL	**60** µF - 250 VL
PQm 200	**45** µF - 450 VL	**80** µF - 250 VL

8 ELECTRIC MOTOR

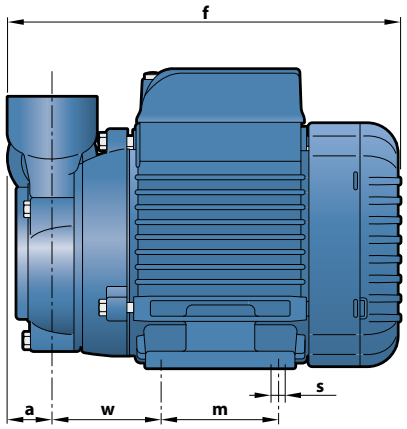
PQm: single-phase 220-230 V - 50 Hz with thermal overload protector incorporated into the winding.
PQ: three-phase 230/400 V - 50 Hz.

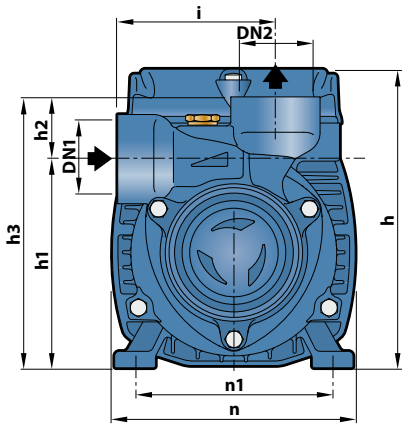
➠ **The three-phase pumps are fitted with high performance motors up to P_2=0.55 kW in class IE2 and from P_2=0.60 kW in class IE3 (IEC 60034-30-1)**

– 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	i	m	n	n1	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**				222	152	113		143	78	80	120	100			**6.9**	**6.2**
PQm 70	**PQ 70**				257	180 *	121		151	83	90	141	112	62		**9.8**	**9.8**
PQm 80	**PQ 80**															**9.8**	**9.8**
PQm 90	**PQ 90**	**¾″**	**¾″**				126	27	153	84						**9.9**	**9.4**
PQm 100	**PQ 100**	**1″**	**1″**	29	322.5	212	140	30	170	89	100	164	125	95	9	**14.1**	**12.8**
PQm 200	**PQ 200**															**15.2**	**14.1**
–	**PQ 300**				342.5											–	**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	**3.4** 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 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				
Three-phase	230 V	400 V	690 V	240 V	415 V
PQ 60	**2.0** A	**1.15** A	–	**1.9** A	**1.1** A
PQ 65	**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	**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 65	**PQ 65**	**200**	**240**
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**
–	**PQ 300**	**72**	**96**