

## Pumps with peripheral impeller

 Clean water

 Industrial use



### PERFORMANCE RANGE

- Flow rate up to **45 l/min** (2.7 m<sup>3</sup>/h)
- Head up to **107 m**

### APPLICATION LIMITS

- Manometric suction lift up to **8 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+50 °C**
- Max. working pressure **10 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



### 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 design features of these particularly compact brass pumps provide a guarantee against rust and oxidation; they are therefore recommended for industrial applications such as **cooling** and **air conditioning**.

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

### PATENTS - TRADE MARKS - MODELS

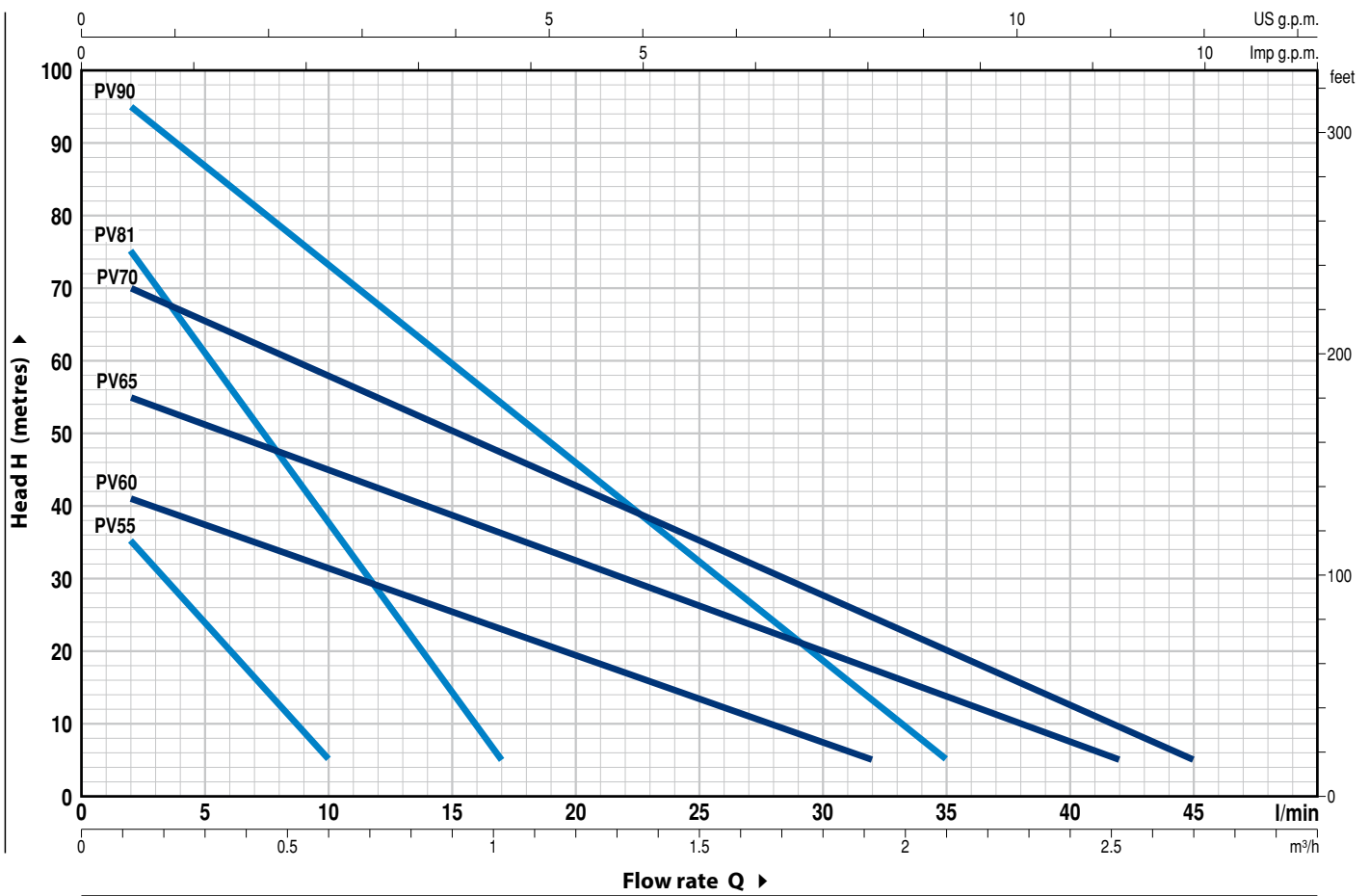
- Shaft: patent n. 0000275945 (PV55)

### OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP X5 class protection for PV70-90

### 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	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54	0.60
					H metres	l/min	0	2	3	4	5	6	7	8	9	10
PVm 55	PV 55	0.18	0.25	IE3	50 Hz	42	35	31	27.5	24	20	16	12.5	9	5	
					60 Hz	55	46	41.5	37	32.5	28	23.5	19	14.5	10	

➡ The PVm55 and PV55 pumps are designed to work also at 60 Hz

MODEL		POWER (P <sub>2</sub> )			Q	Flow rate														
Single-phase	Three-phase	kW	HP	▲		m <sup>3</sup> /h	0	0.12	0.30	0.60	0.90	1.02	1.2	1.5	1.8	1.9	2.1	2.5	2.7	
					H metres	l/min	0	2	5	10	15	17	20	25	30	32	35	42	45	
PVm 60	PV 60	0.37	0.50	IE3	H metres	43	41	37.5	31.5	25.5	23	19.5	13	7.5	5					
PVm 81	PV 81	0.37	0.50			85	75	61	38	15	5									
PVm 65	PV 65	0.60	0.85			58	55	51	45	39	36	32.5	26	20	17.5	14	5			
PVm 70	PV 70	0.90	1.20			74	70	65.5	58	50	47	43	35	28	25	20	9.5	5		
PVm 90	PV 90	0.90	1.20			100	95	87	73	59.5	54	46	32	19	13	5				

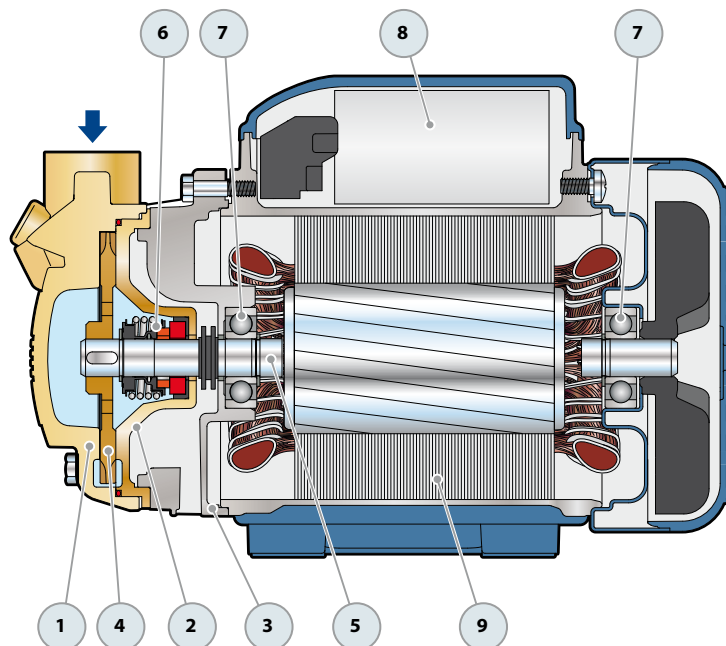
Q = Flow rate H = Total manometric head HS = Suction height

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

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

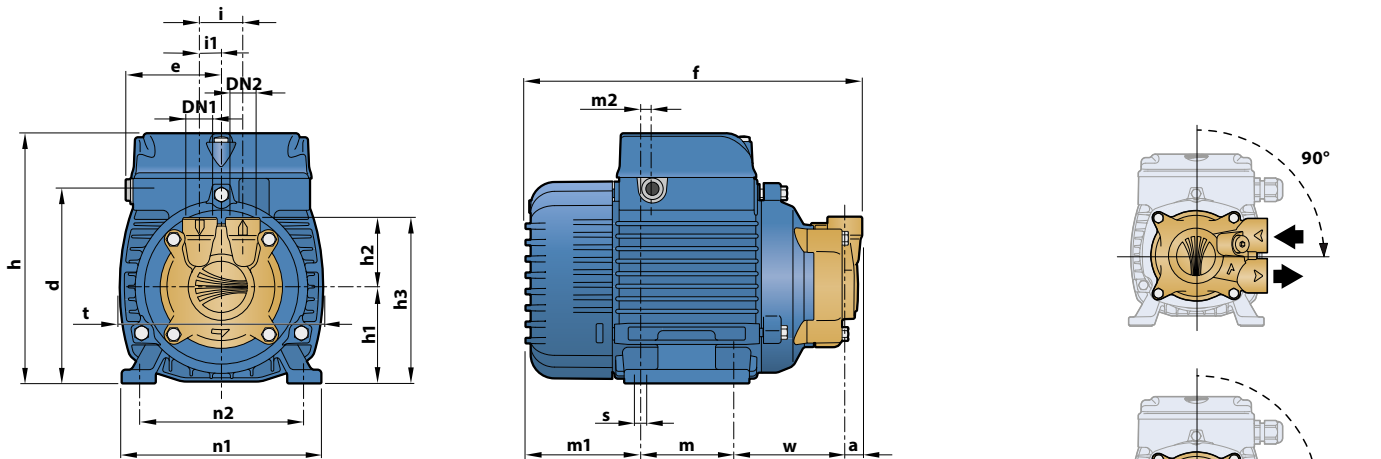
## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Brass complete with threaded ports in compliance with ISO 228/1				
2	<b>PUMP BODY BACK-PLATE</b>	Brass				
3	<b>MOTOR BRACKET</b>	Aluminium				
4	<b>IMPELLER</b>	Brass with peripheral radial vanes				
5	<b>MOTOR SHAFT</b>	Stainless steel AISI 431				
6	<b>MECHANICAL SEAL</b>	<i>Seal</i>	<i>Shaft</i>	<i>Materials</i>		
		<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>
		ST1-12	Ø 12 mm	Silicon carbide	Graphite	NBR
7	<b>BEARINGS</b>	<i>Pump</i>	<i>Model</i>			
		PV 55-60-65-81	6201 ZZ / 6201 ZZ			
		PV 70-90	6203 ZZ / 6203 ZZ			
8	<b>CAPACITOR</b>	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>	
		PVm 55	10 µF - 450 VL		25 µF - 250 VL	
		PVm 60	10 µF - 450 VL		25 µF - 250 VL	
		PVm 81	14 µF - 450 VL		25 µF - 250 VL	
		PVm 65	14 µF - 450 VL		25 µF - 250 VL	
		PVm 70	25 µF - 450 VL		60 µF - 300 VL	
		PVm 90	25 µF - 450 VL		60 µF - 300 VL	
9	<b>ELECTRIC MOTOR</b>	<b>PVm:</b> single-phase 230 V - 50 Hz (50/60 Hz for PVm55) with thermal overload protector incorporated into the winding.				
		<b>PV:</b> three-phase 230/400 V - 50 Hz (50/60 Hz for PV55).				
		➔ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b>				
		- Insulation: class F - Protection: IP X4				

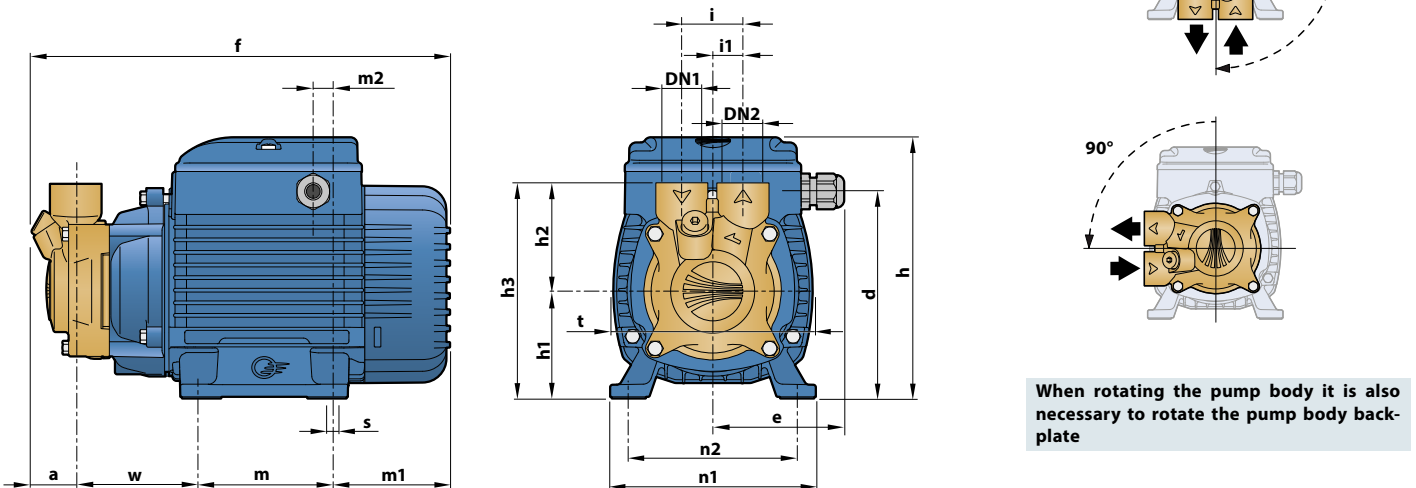


## DIMENSIONS AND WEIGHT

### PV 55



### PV 60-81-65-70-90



When rotating the pump body it is also necessary to rotate the pump body back-plate

MODEL		PORTS		DIMENSIONS mm																	kg		
Single-phase	Three-phase	DN1	DN2	a	d	e	f	h	h1	h2	h3	i	i1	m	m1	m2	n1	n2	t	w	s	1~	3~
PVm 55	PV 55	1/4"	1/4"	10.5	112	55.5	194	145	56	40	96	25	12.5	55	65.5	8	116	94/100	116	63	7	4.4	4.4
PVm 60	PV 60	1/2"	1/2"	26	120.5	76	243.5	152	63	62	125	35	17.5	80	69.5	11.5	120	98/102	116	68	7	5.5	5.5
PVm 81	PV 81			26.5			241			65	128									65		68	6.8
PVm 65	PV 65	3/4"	3/4"	27	139	79	243.5	180	71	66	129	45	22.5	90	80.5	22	134	110/114	141	67	7	6.8	6.8
PVm 70	PV 70			26.5			276			66	137									79		10.2	9.5
PVm 90	PV 90			28			275			66	137									76.5		10.0	9.3

(\*) h=196 mm for single-phase versions at 110 V

## ABSORPTION

MODEL	VOLTAGE	
<b>Single-phase</b>	230 V	230 V
PVm 55 (50 Hz)	1.6 A	3.2 A
PVm 55 (60 Hz)	2.0 A	4.0 A
PVm 60	2.3 A	4.6 A
PVm 81	2.8 A	5.6 A
PVm 65	4.4 A	8.8 A
PVm 70	6.3 A	12.6 A
PVm 90	6.3 A	12.6 A

MODEL	VOLTAGE	
<b>Three-phase</b>	230 V	400 V
PV 55 (50 Hz)	1.7 A	1.0 A
PV 55 (60 Hz)		
PV 60	2.1 A	1.2 A
PV 81	2.1 A	1.2 A
PV 65	2.6 A	1.5 A
PV 70	4.2 A	2.4 A
PV 90	4.2 A	2.4 A