

## Vertical multi-stage pumps

-  Clean water
-  Domestic use
-  Civil use
-  Industrial use



### PERFORMANCE RANGE

- Flow rate up to **180 l/min** (10.8 m<sup>3</sup>/h)
- Head up to **105 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+60 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **11 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 and with liquids that are not chemically aggressive towards the materials from which the pump is made. The high performance and adaptability to a wide range of applications make them an ideal choice in domestic, civil and industrial applications, in particular for the distribution of water in combination with pressure tanks and for boosting pressure in the network. Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

### OPTIONS AVAILABLE ON REQUEST

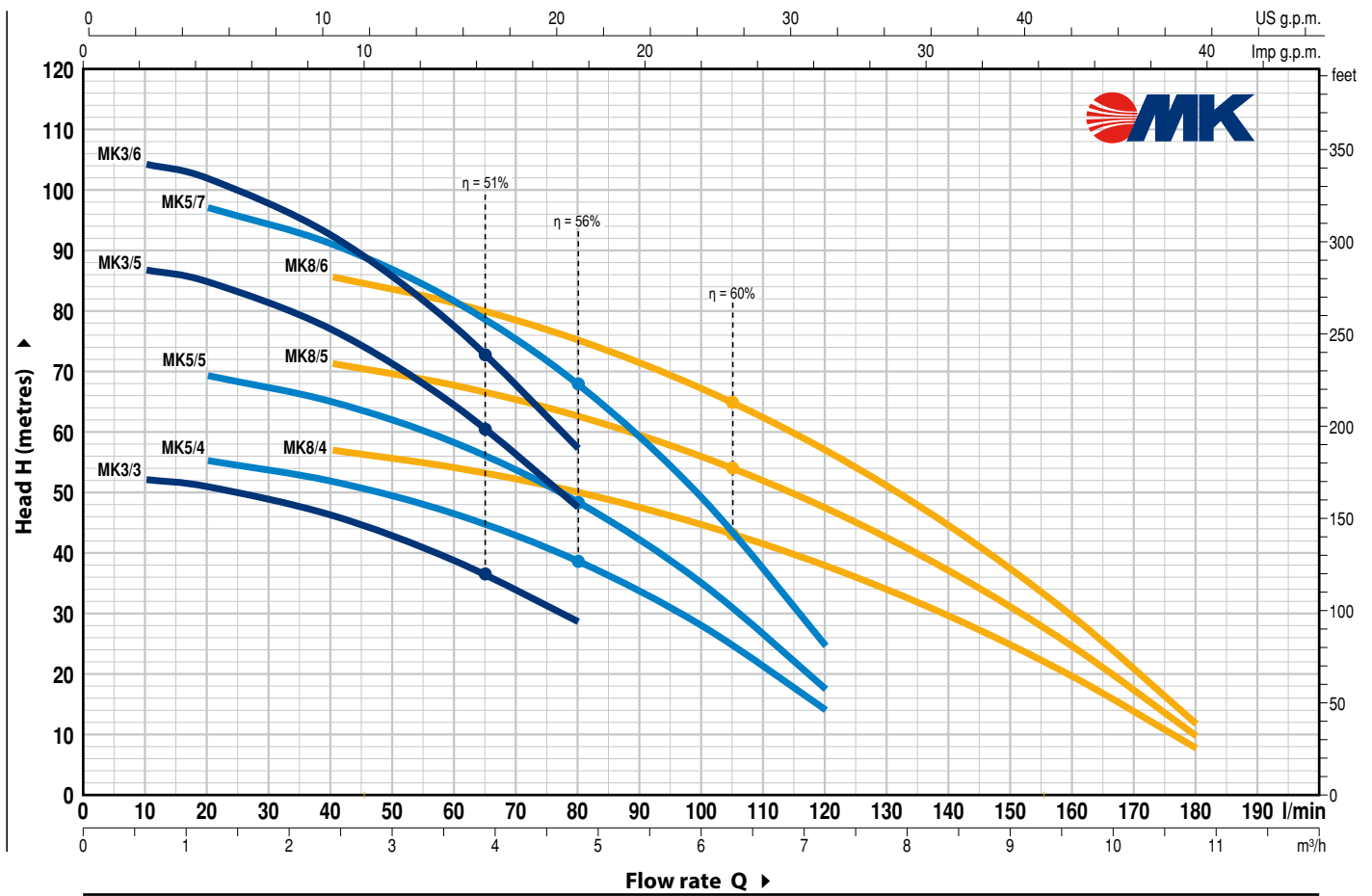
- Other voltages

### GUARANTEE

2 years subject to terms and conditions

### CHARACTERISTIC CURVES AND PERFORMANCE DATA

60 Hz n = 3450 min<sup>-1</sup> HS = 0 m



MODEL		POWER (P <sub>2</sub> )		Q	Flow rate (l/min)													
Single-phase	Three-phase	kW	HP		0	0.6	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8			
MK3/3	MK 3/3	0.75	1	H metres	0	10	20	40	60	80	100	120	140	160	180			
MK3/5	MK 3/5	1.1	1.5		52.5	52	51	46.5	38.5	28.5								
MK3/6	MK 3/6	1.5	2		88	87	85	77	64.5	47.5								
MK5/4	MK 5/4	0.75	1		105	104	102	93	77	57.5								
MK5/5	MK 5/5	1.1	1.5		57.5	-	55.5	52	46.5	38.5	28	14						
MK5/7	MK 5/7	1.5	2		72	-	69.5	65	58	48.5	35	17.5						
MK8/4	MK 8/4	1.1	1.5		100	-	97	91	81	67.5	49	24.5						
MK8/5	MK 8/5	1.5	2		60	-	-	57	54	50	44.5	38	29.5	19.6	8			
MK8/6	MK 8/6	2.2	3		75	-	-	71	67.5	62.5	56	47.5	37	24.5	10			
				90	-	-	86	81	75	67	57	44.5	29.5	11.5				

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>SUCTION BODY</b>	Cast iron with an Epoxy Electro Coating complete with threaded suction port ISO 228/1				
2	<b>EXTERNAL SLEEVE</b>	Stainless steel AISI 304				
3	<b>DELIVERY BODY</b>	Cast iron with an Epoxy Electro Coating complete with threaded delivery port ISO 228/1				
4	<b>IMPELLERS AND DIFFUSERS</b>	Noryl®				
5	<b>DIAPHRAGMS</b>	Stainless steel AISI 304 complete with anti-wear rings				
6	<b>MOTOR SHAFT</b>	Stainless steel AISI 431				
7	<b>MECHANICAL SEAL</b>	<b>Seal Model</b>	<b>Shaft Diameter</b>	<b>Stationary ring</b>	<b>Rotational ring</b>	<b>Elastomer</b>
		<b>FN-18</b>	<b>Ø 18 mm</b>	Graphite	Ceramic	NBR
8	<b>BEARINGS</b>	<b>6304 ZZ / 6204 ZZ</b>				

## 9 CAPACITOR

Pump	Capacitance	
	(220 V)	(110 V or 127 V)
Single-phase		
<b>MKm 3/3</b>	<b>25</b> µF - 450 VL	<b>60</b> µF - 250 VL
<b>MKm 3/5</b>	<b>31.5</b> µF - 450 VL	<b>60</b> µF - 250 VL
<b>MKm 3/6</b>	<b>45</b> µF - 450 VL	<b>80</b> µF - 250 VL
<b>MKm 5/4</b>	<b>25</b> µF - 450 VL	<b>60</b> µF - 250 VL
<b>MKm 5/5</b>	<b>31.5</b> µF - 450 VL	<b>60</b> µF - 250 VL
<b>MKm 5/7</b>	<b>45</b> µF - 450 VL	<b>80</b> µF - 250 VL
<b>MKm 8/4</b>	<b>31.5</b> µF - 450 VL	<b>60</b> µF - 250 VL
<b>MKm 8/5</b>	<b>45</b> µF - 450 VL	<b>80</b> µF - 250 VL
<b>MKm 8/6</b>	<b>50</b> µF - 450 VL	-

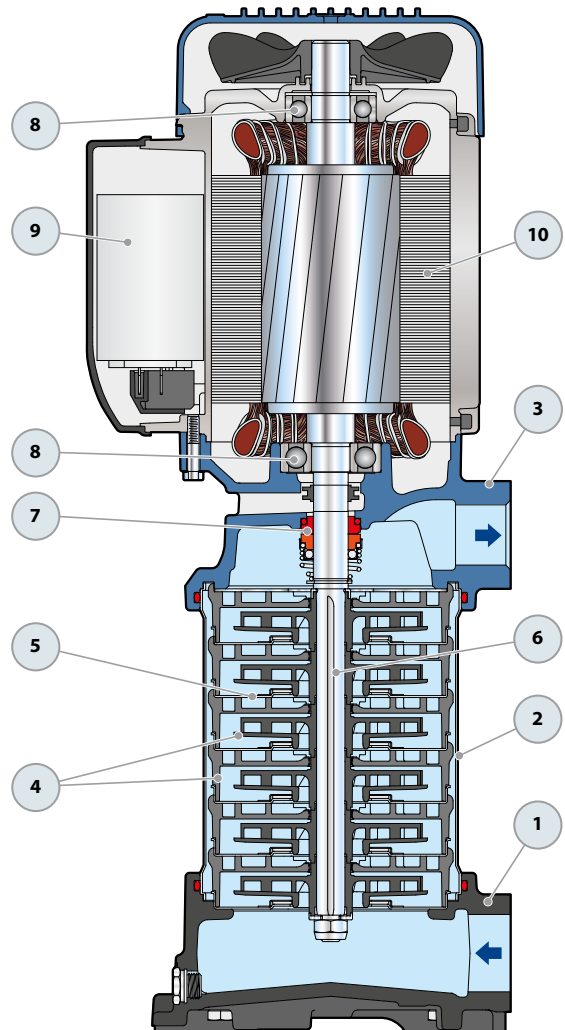
## 10 ELECTRIC MOTOR

**MKm:** single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding;  
single-phase 110 V /127 V - 60 Hz with thermal overload protector incorporated up to P<sub>2</sub>=1.1 kW.

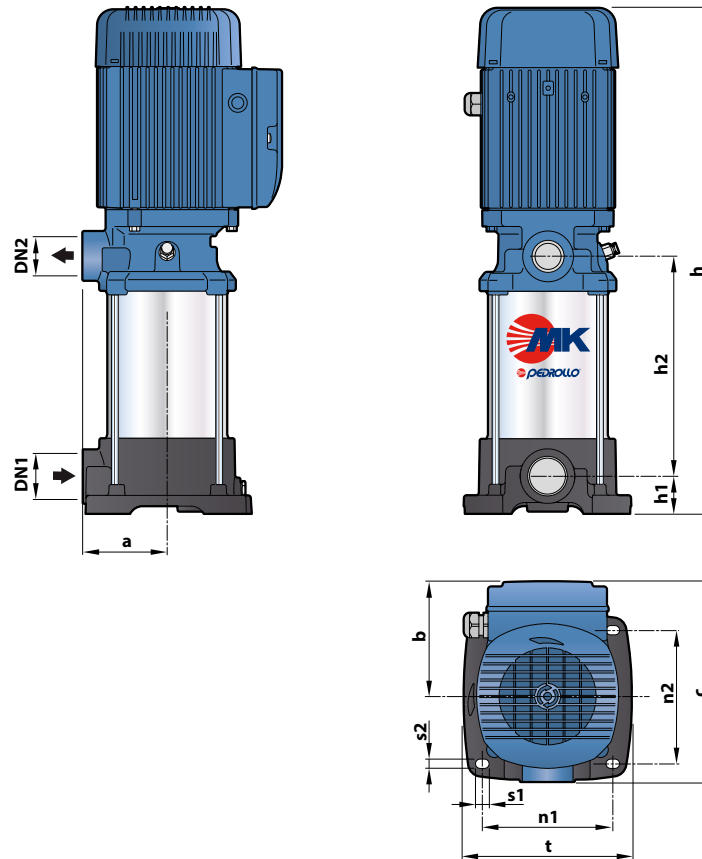
**MK:** three-phase 220/380 V - 60 Hz or 220/440 V - 60 Hz

➡ **The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)**

- Insulation: class F
- Protection: IP X4



## DIMENSIONS AND WEIGHT



MODEL		PORTS		N. STAGES	DIMENSIONS mm											kg	
Single-phase	Three-phase	DN1	DN2		a	h	h1	h2	n1	n2	t	b	c	s1	s2	1~	3~
MKm 3/3	MK 3/3	1¼"	1"	3	93	447	41.5	132.5	143	146	185	127	220	14.5	10	20.0	20.1
MKm 3/5	MK 3/5			5		501		186.5								22.0	22.0
MKm 3/6	MK 3/6			6		528		213.5								23.9	24.0
MKm 5/4	MK 5/4			4		474		159.5								20.5	20.6
MKm 5/5	MK 5/5			5		501		186.5								21.9	22.0
MKm 5/7	MK 5/7			7		555		240.5								24.6	24.1
MKm 8/4	MK 8/4			4		474		159.5								21.6	21.6
MKm 8/5	MK 8/5			5		501		186.5								23.3	23.1
MKm 8/6	MK 8/6			6		548		213.5								26.7	26.6

## ABSORPTION

MODEL	VOLTAGE		
	220 V	110 V	127 V
MKm 3/3	5.1 A	10.2 A	8.8 A
MKm 3/5	7.5 A	15.0 A	13.0 A
MKm 3/6	9.2 A	18.4 A	15.9 A
MKm 5/4	5.9 A	11.8 A	10.2 A
MKm 5/5	7.0 A	14.0 A	12.1 A
MKm 5/7	9.7 A	19.4 A	16.8 A
MKm 8/4	7.8 A	15.6 A	13.5 A
MKm 8/5	9.9 A	19.8 A	17.1 A
MKm 8/6	11.2 A	22.4 A	19.4 A

MODEL	VOLTAGE			
	220 V	380 V	220 V	440 V
MK 3/3	5.6 A	3.2 A	4.8 A	2.8 A
MK 3/5	4.9 A	2.8 A	4.2 A	2.4 A
MK 3/6	6.3 A	3.6 A	5.4 A	3.1 A
MK 5/4	5.8 A	3.4 A	5.0 A	2.9 A
MK 5/5	4.7 A	2.7 A	4.0 A	2.3 A
MK 5/7	6.5 A	3.8 A	5.7 A	3.3 A
MK 8/4	5.0 A	2.9 A	4.3 A	2.5 A
MK 8/5	6.6 A	3.8 A	5.7 A	3.3 A
MK 8/6	7.8 A	4.5 A	6.7 A	3.9 A