

-  Clean water
-  Civil use
-  Agricultural use
-  Industrial use



### PERFORMANCE RANGE

- Flow rate up to **900 l/min** (54 m<sup>3</sup>/h)
- Head up to **76 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+40 °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



EU REGULATION N. 547/2012

### 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. As a result of their reliability and the fact that they are easy to use, these pumps are widely used in civil, agricultural and industrial applications such as for supplying water, in air conditioning and cooling systems, for irrigation, etc. The pump should be installed in an enclosed environment or sheltered from inclement weather.

### PATENTS - TRADE MARKS - MODELS

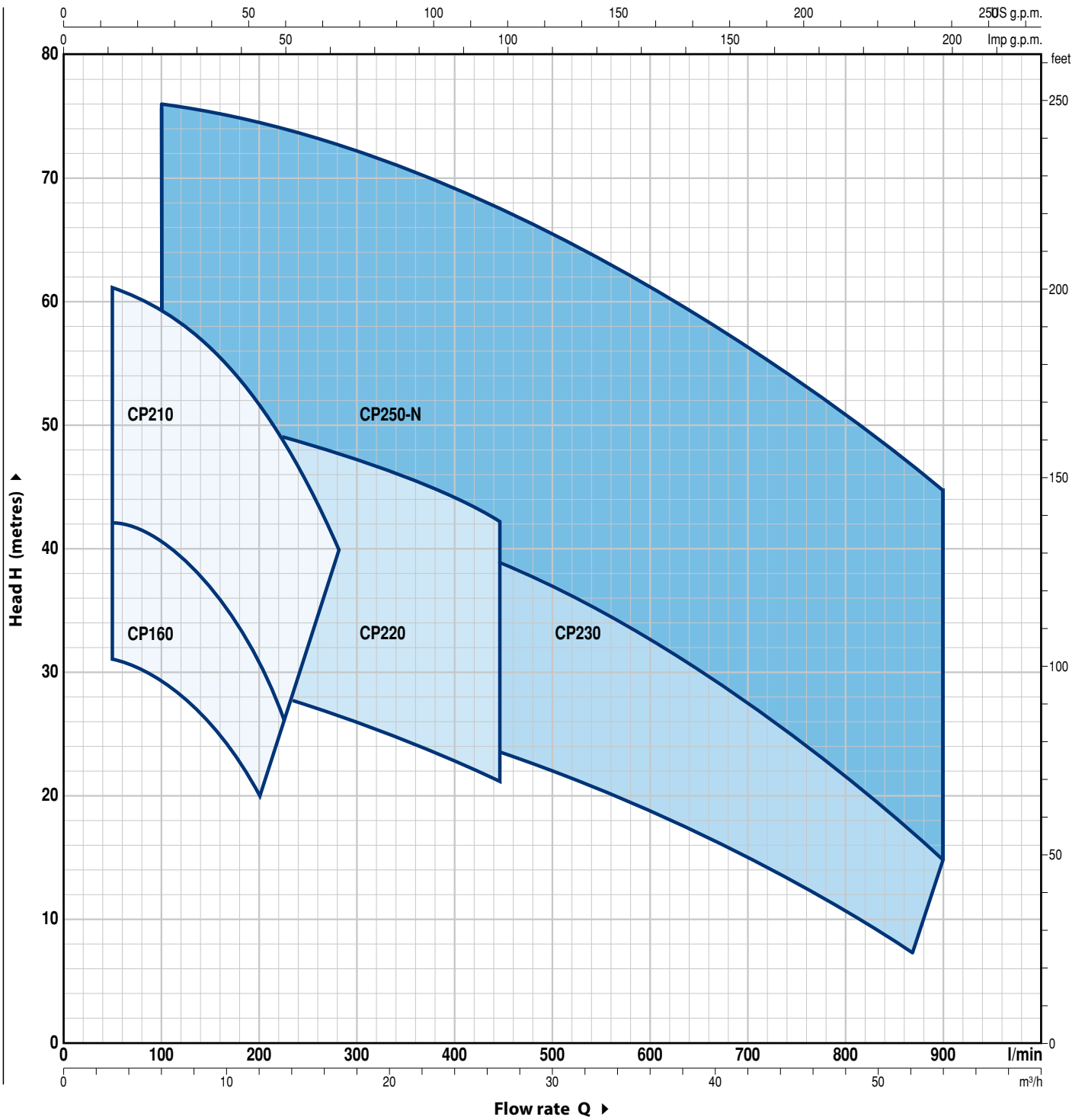
- Registered EU Design n. 002098434 for CP 160, CP210, CP250
- Registered Italian model n. 72753 for CP 220, CP 230

### OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel pump shaft for CP 220, CP 230, CP250
- Other voltages or 60 Hz frequency
- IP X5 class protection for CP 160

**PERFORMANCE RANGE**

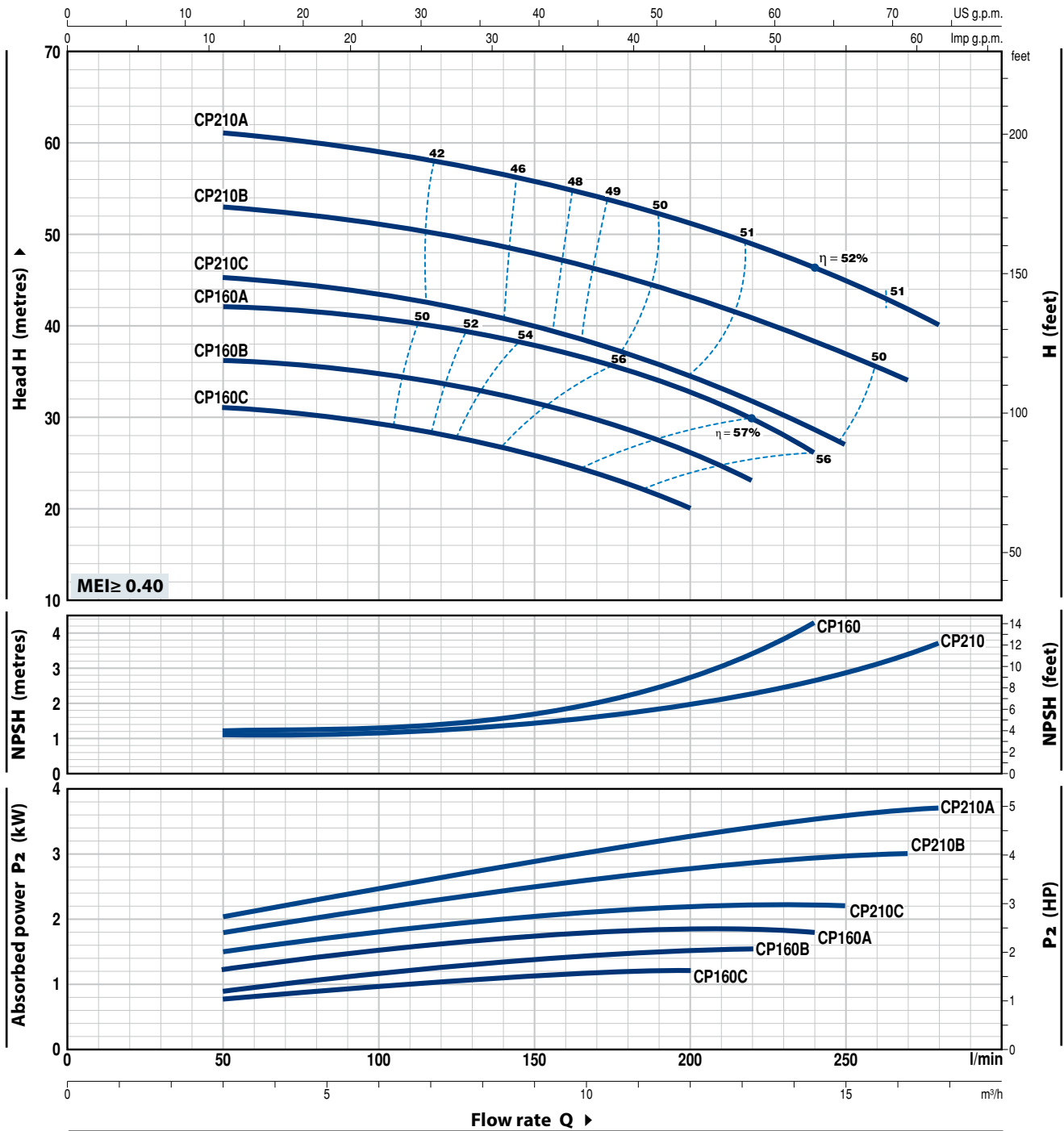
**50 Hz n= 2900 min<sup>-1</sup> HS= 0 m**



# CP 160-210

## 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 Q															
Single-phase	Three-phase	kW	HP			m <sup>3</sup> /h	0	3	4.5	6	7.5	9	10.5	12	13.2	14.4	15	16.2	16.8		
					l/min	0	50	75	100	125	150	175	200	220	240	250	270	280			
CPm 160C	CP 160C	1.1	1.5	IE3	H metres	32	31	30.5	29.5	28	26	23	20								
CPm 160B	CP 160B	1.5	2			37	36	35.5	34.5	33.5	31.5	29	26.5	23							
-	CP 160A	2.2	3			43	42	41.5	40.5	39.5	38	35.5	33	30	26						
CPm 210C	CP 210C	2.2	3			46	45.5	44.5	43.5	42	40	37.5	34.5	32	28.5	27					
-	CP 210B	3	4			54	53	52	51	49.5	48	45.5	43	40	38.5	37	34				
-	CP 210A	4	5.5			61	61	60	59	57.5	56	53.5	51	49	46.5	45	42	40			

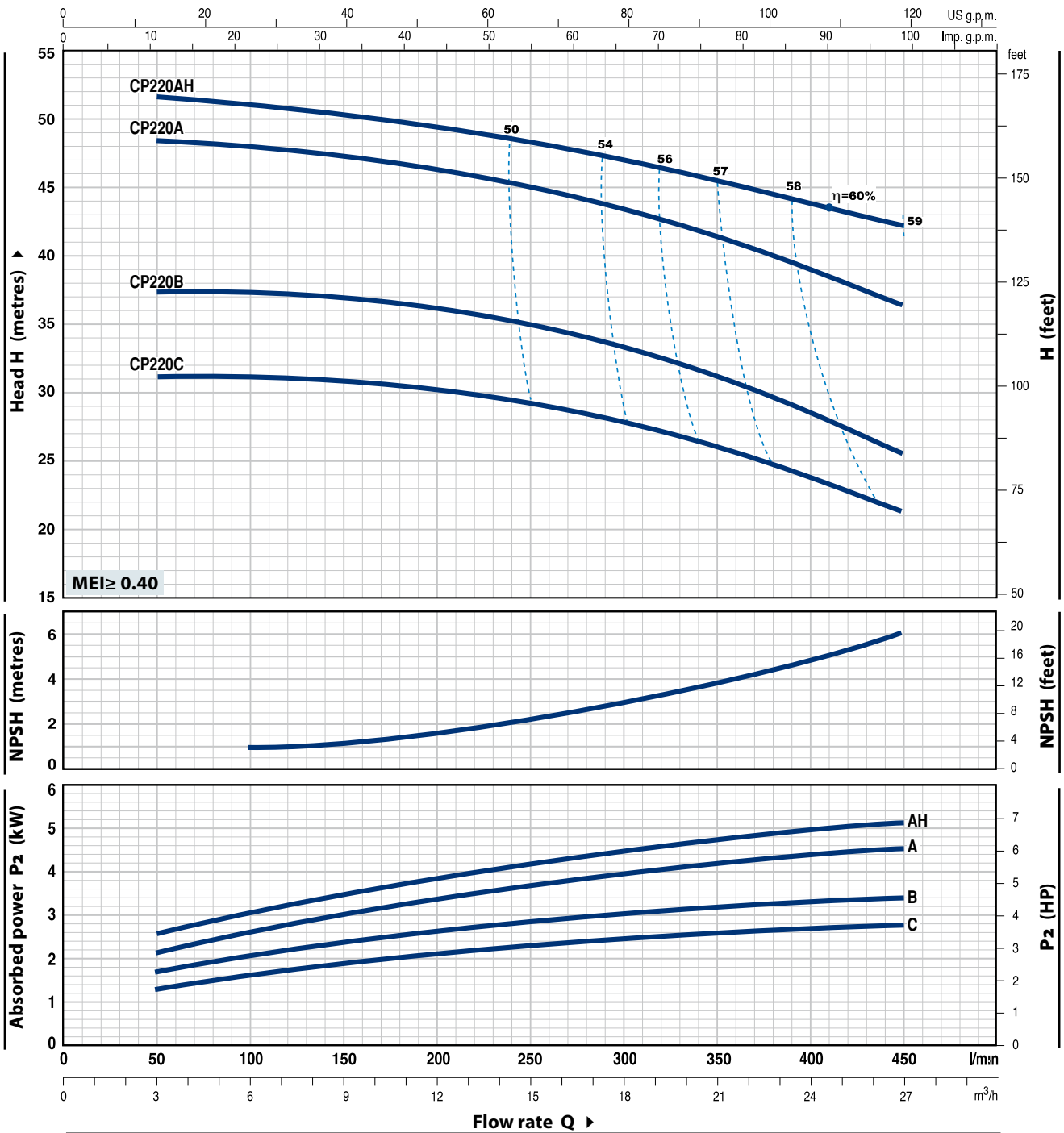
Q = Flow rate H = Total manometric head HS = Suction height

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

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

## 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	3	6	12	18	24
	CP 220C	2.2	3	IE3	H metres	0	50	100	200	300	400	450
-	CP 220B	3	4			32	31.5	31	30	28	24	21
-	CP 220A	4	5.5			38	37.5	37	36	33.5	29	25
-	CP 220AH	5.5	7.5			49	48.5	48	46	43.5	39.5	36
						52	51.5	51	49	47	44	42

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

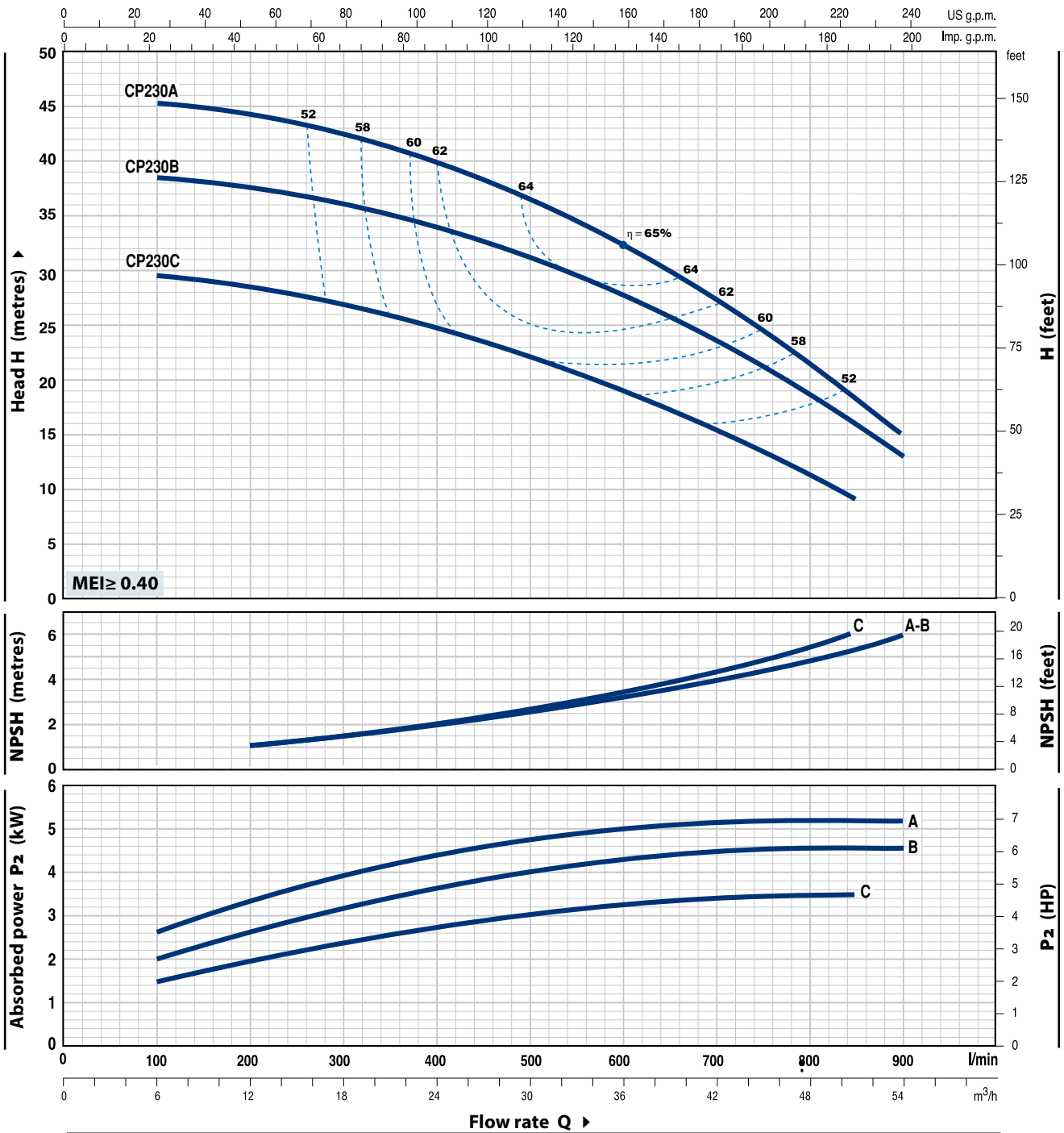
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

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

# CP 230

## 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 Q												
	kW	HP			0	6	12	18	24	30	36	42	48	51	54		
Three-phase					0	100	200	300	400	500	600	700	800	850	900		
CP 230C	3	4	IE3	H metres	30	29.5	28.5	27	25	22	19.5	15.5	11.5	9			
CP 230B	4	5.5		39	38.5	38	36	34	31	28	24	18.5	15	13			
CP 230A	5.5	7.5		46	45.5	44.5	42	40	37	32.5	27.5	21.5	18	15			

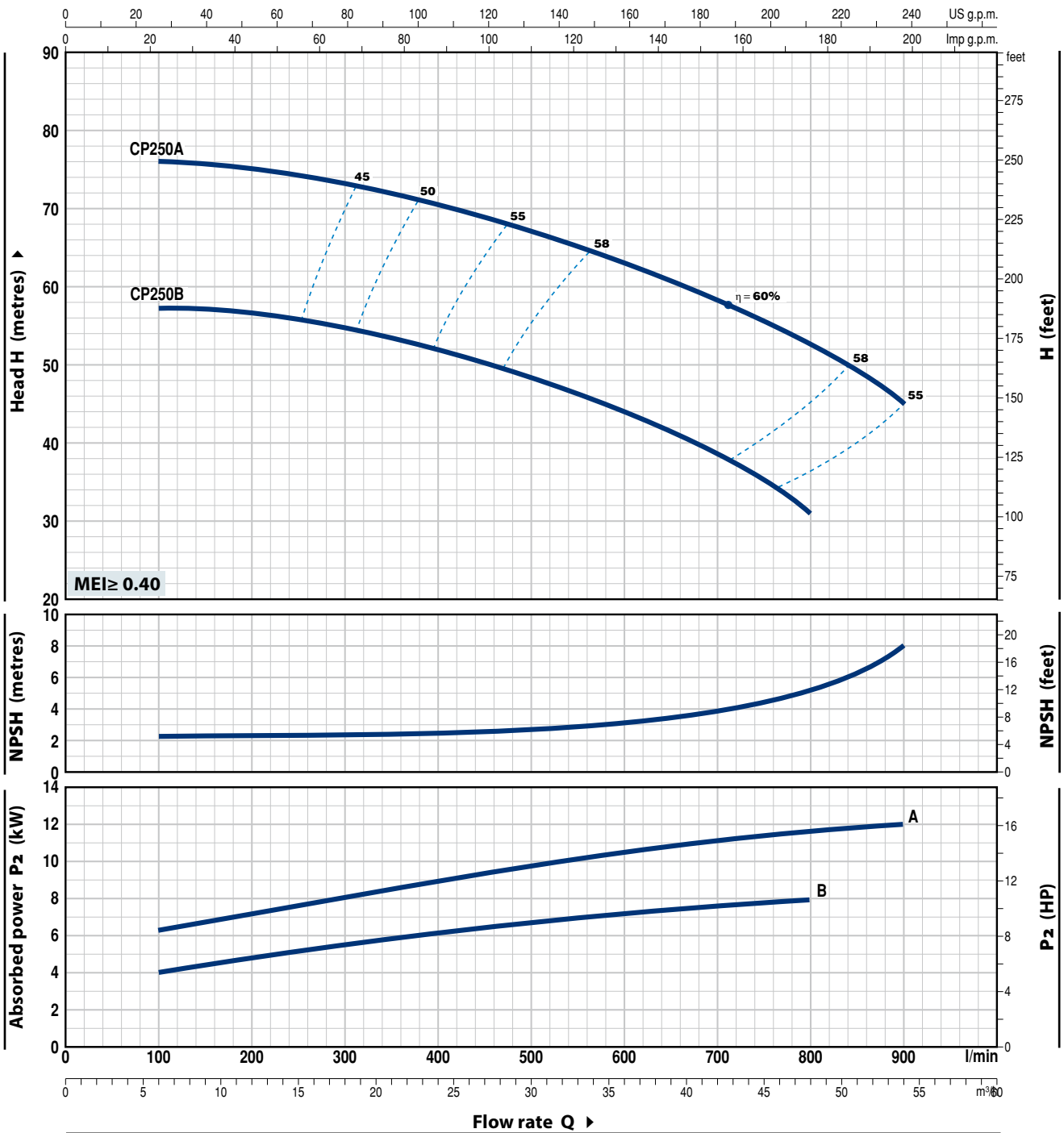
Q = Flow rate H = Total manometric head HS = Suction height

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

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

## 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									
	kW	HP			0	6	12	18	24	30	36	42	48	54
Three-phase				l/min	0	100	200	300	400	500	600	700	800	900
CP 250B	7.5	10	IE3	H metres	57	57.4	56.8	54.8	52	48.4	44.1	38.8	31.3	
CP 250A	11	15				76.1	76	74.9	73.2	70.7	67.3	63	58.1	52.7

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

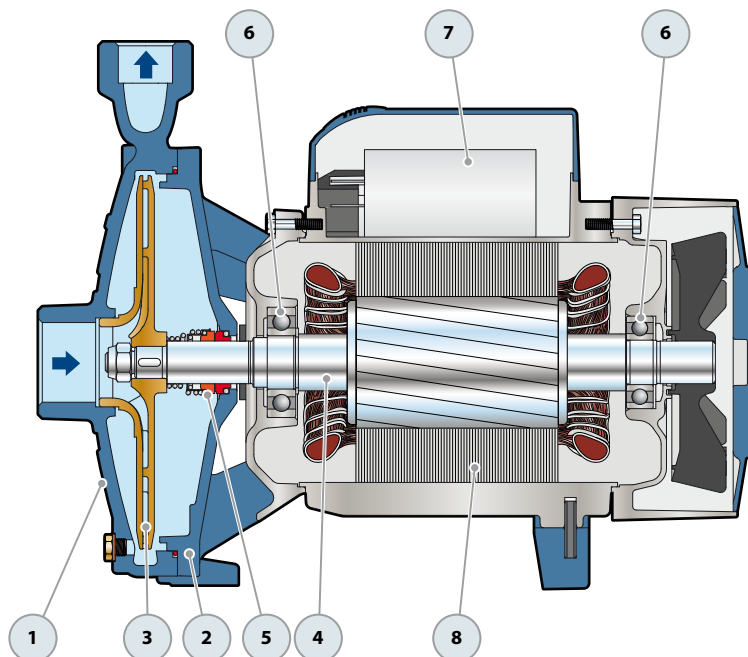
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

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

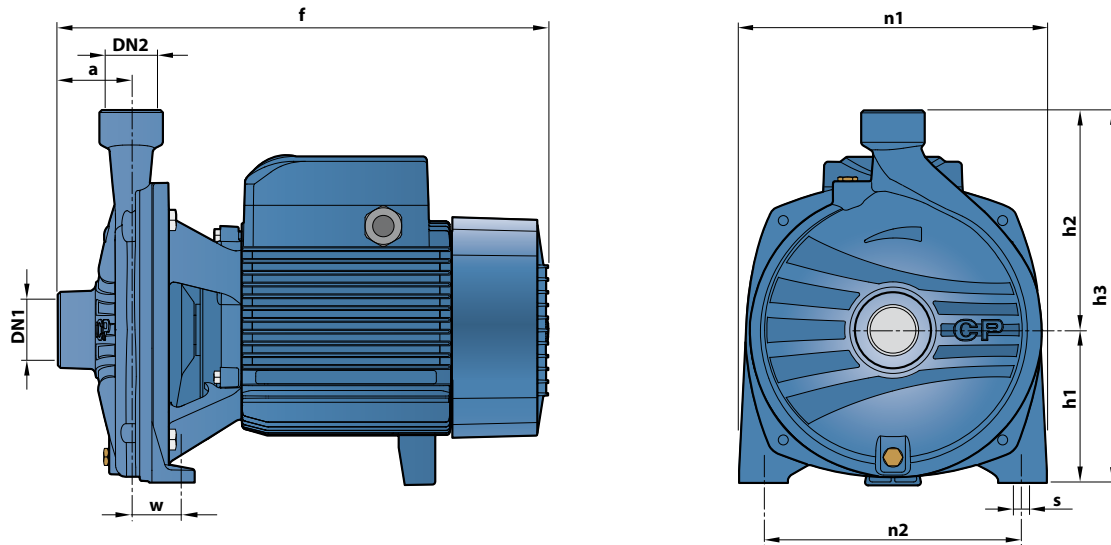
# CP 160-210

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Cast iron complete with threaded ports in compliance with ISO 228/1					
2	<b>BODY BACKPLATE</b>	Cast iron					
3	<b>IMPELLER</b>	Stainless steel for CP160 Brass for CP 210					
4	<b>MOTOR SHAFT</b>	Stainless steel EN 10088-3 - 1.4104					
5	<b>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>
		CP 160	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
CP 210	FN-24	Ø 24 mm	Graphite	Ceramic	NBR		
6	<b>BEARINGS</b>	<i>Pump</i>	<i>Model</i>				
		CP 160	6204 ZZ / 6204 ZZ				
		CP 210	6206 ZZ - C3 / 6205 ZZ				
7	<b>CAPACITOR</b>	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>			
		CPm 160C	31.5 µF - 450 VL	60 µF - 250 VL			
		CPm 160B	45 µF - 450 VL	80 µF - 250 VL			
		CPm 210C	70 µF - 450 VL	-			
8	<b>ELECTRIC MOTOR</b>	<p>CPm: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding (up to 1.5 kW).</p> <p>CP: three-phase 230/400 V - 50 Hz.</p> <p>➔ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b></p> <p>- Insulation: class F - Protection: IP X4</p>					



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm									kg		
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3	n1	n2	w	s	1~	3~	
CPm 160C	CP 160C	1½"	1"	54	373	110	150	260	207	165	44.5	11	19.7	17.7	
CPm 160B	CP 160B												-	21.0	21.0
-	CP 160A												-	-	23.8
CPm 210C	CP 210C			60	402	125	180	305	252	210	39.5	11	26.0	27.5	
-	CP 210B												-	30.0	
-	CP 210A												-	32.0	

## ABSORPTION

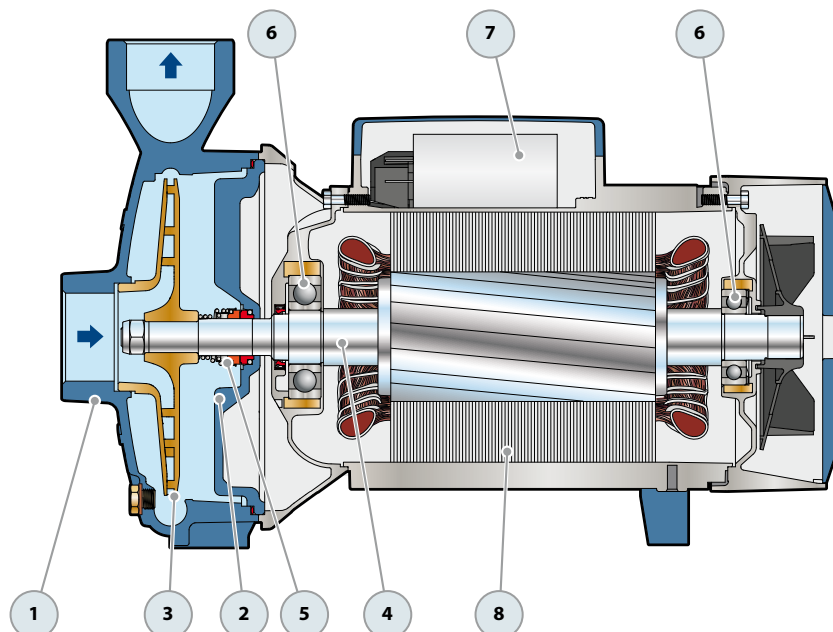
MODEL	VOLTAGE		
	230 V	240 V	110 V
CPm 160C	8.5 A	8.2 A	17.0 A
CPm 160B	10.3 A	10.0 A	20.6 A
CPm 210C	14.5 A	12.7 A	29.0 A

MODEL	VOLTAGE					
	230 V	400 V	690 V	240 V	415 V	720 V
CP 160C	5.7 A	3.3 A	1.9 A	5.5 A	3.2 A	1.8 A
CP 160B	6.9 A	4.0 A	2.3 A	6.7 A	3.8 A	2.2 A
CP 160A	8.9 A	5.1 A	2.9 A	8.3 A	4.8 A	2.8 A
CP 210C	9.2 A	5.3 A	3.1 A	8.8 A	5.1 A	2.9 A
CP 210B	11.2 A	6.5 A	3.8 A	10.8 A	6.2 A	3.6 A
CP 210A	14.8 A	8.5 A	4.9 A	14.2 A	8.2 A	4.7 A

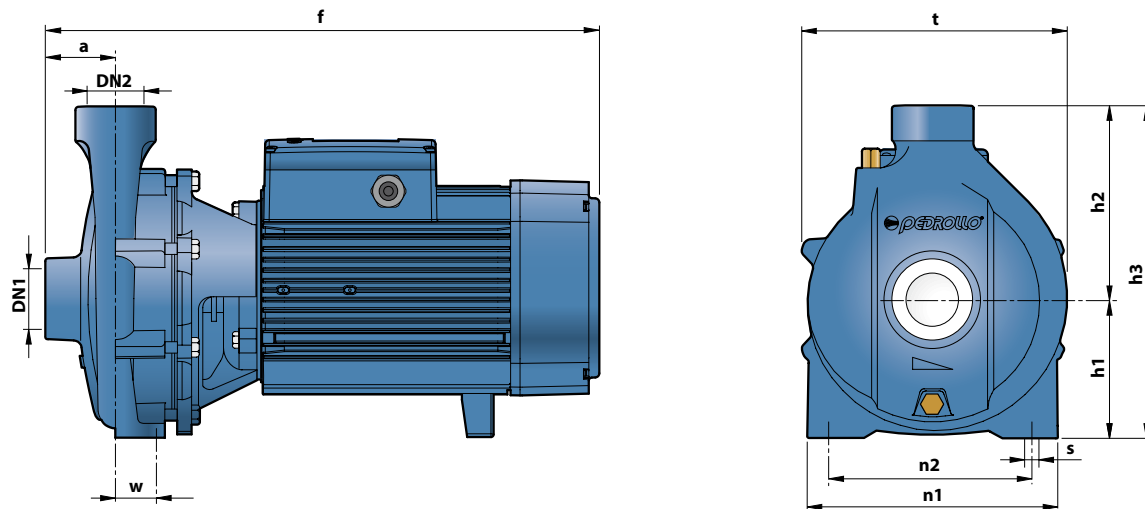


# CP 220-230-250

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	<b>PUMP BODY</b>	Cast iron complete with threaded ports in compliance with ISO 228/1					
2	<b>BODY BACKPLATE</b>	Cast iron					
3	<b>IMPELLER</b>	Brass for CP 220, CP 230 Cast iron for CP 250					
4	<b>MOTOR SHAFT</b>	Stainless steel AISI 431					
5	<b>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>
		CP 220C-B CP 230C	FN-20	Ø 20 mm	Graphite	Ceramic	NBR
		CP 220A-AH CP 230B-A CP 250B	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
		CP 250A	FN-32 NU	Ø 32 mm	Graphite	Ceramic	NBR
6	<b>BEARINGS</b>	<i>Pump</i>	<i>Model</i>				
		CP 220C	6206 ZZ - C3 / 6204 ZZ				
		CPm 220C					
		CP 220B	6206 ZZ - C3 / 6205 ZZ				
		CP 230C					
		CP 220A-AH CP 230B-A	6307 ZZ - C3 / 6206 ZZ - C3				
		CP 250B CP 250A	6310 ZZ - C3 / 6308 ZZ - C3				
7	<b>CAPACITOR</b>	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>				
		CPm 220C	70 µF - 450 VL				
8	<b>ELECTRIC MOTOR</b>	<b>CPm:</b> single-phase 230 V - 50 Hz. <b>CP:</b> three-phase 230/400 V - 50 Hz up to 4 kW. 400/690 V - 50 Hz from 5.5 to 11 kW.					
➔ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b> – Insulation: class F – Protection: IP X5							



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg			
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3	t	n1	n2	w	s	1~	3~		
CPm 220C	CP 220C	2"	2"	70	440/429	132	183	315	243	230	170	40	14	-	-		
-	CP 220B				441												
-	CP 220A				460												
-	CP 220AH				505	136	192	328	273	250	190						
-	CP 230C				440												
-	CP 230B				460												
-	CP 230A				505												
-	CP 250B-N				65	507	162	232	392	317	294					230	45
-	CP 250A-N					570											

## ABSORPTION

MODEL	VOLTAGE	
Single-phase	230 V	240 V
CPm 220C	15.8 A	15.0 A

MODEL	VOLTAGE					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
CP 220C	11.4 A	6.6 A	3.8 A	10.7 A	6.2 A	3.6 A
CP 220B	12.6 A	7.3 A	4.2 A	12.0 A	7.0 A	4.0 A
CP 220A	17.0 A	9.8 A	5.7 A	16.5 A	9.5 A	5.5 A
CP 220AH	20.0 A	11.5 A	6.7 A	19.2 A	11.0 A	6.4 A
CP 230C	13.2 A	7.6 A	4.4 A	12.8 A	7.4 A	4.3 A
CP 230B	16.8 A	9.7 A	5.6 A	16.2 A	9.4 A	5.4 A
CP 230A	20.0 A	11.5 A	6.7 A	19.2 A	11.0 A	6.4 A
CP 250B	25.9 A	15.0 A	8.7 A	25.0 A	14.5 A	8.4 A
CP 250A	39.0 A	22.5 A	13.0 A	38.9 A	22.5 A	13.0 A