



PERFORMANCE RANGE

- Flow rate up to **900 l/min** (54 m³/h)
- Head up to **74 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 60034-1
IEC 60034-1
CEI 2-3



REGULATION (EU) N. 547/2012

CERTIFICATIONS



INSTALLATION AND USE

Suitable for use with clean water and 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 conditioning and cooling systems, for irrigation, etc. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

- Registered Community Design n° 002098434 per CP 160, CP210
- Registered Italian model n° 72753 for CP 220, CP 230, CP250

OPTIONALS AVAILABLE ON REQUEST

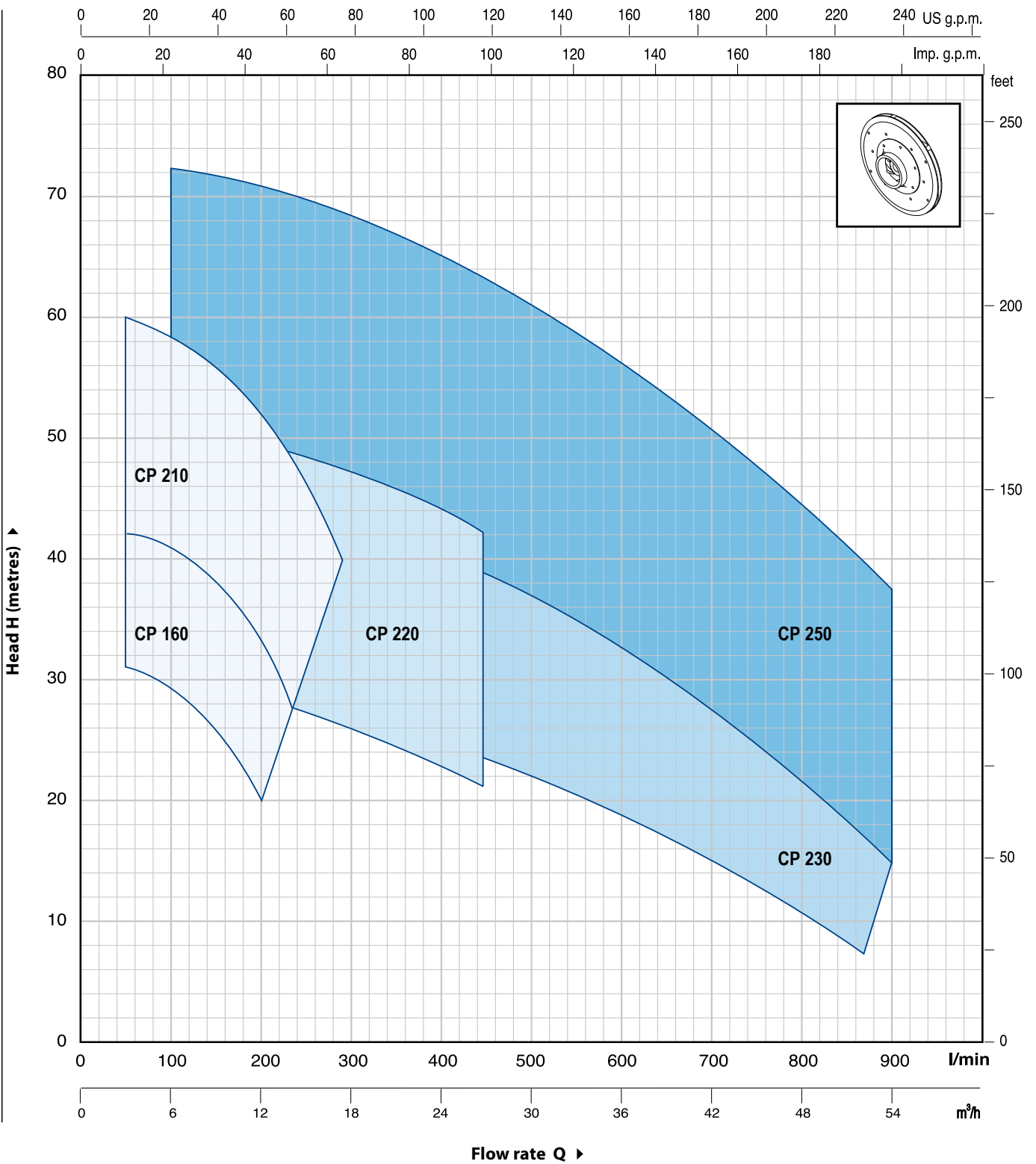
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft for CP 220, CP 230, CP250
- Other voltages or 60 Hz frequency
- IP X5 class protection for CP 160

GUARANTEE

2 years subject to terms and conditions

PERFORMANCE RANGE

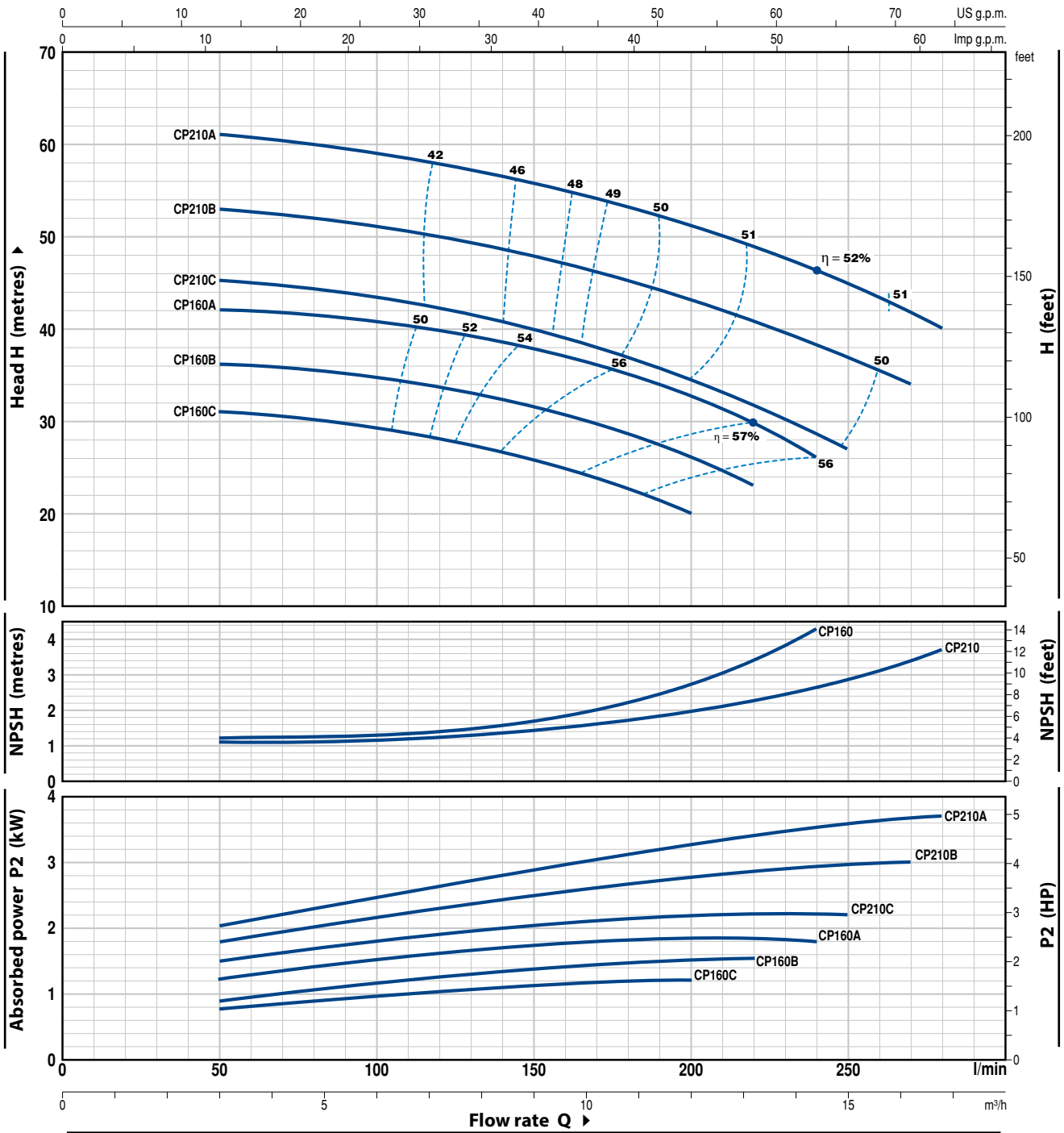
50 Hz n= 2900 1/min HS= 0 m



CP 160-210

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n=2900 1/min HS= 0 m



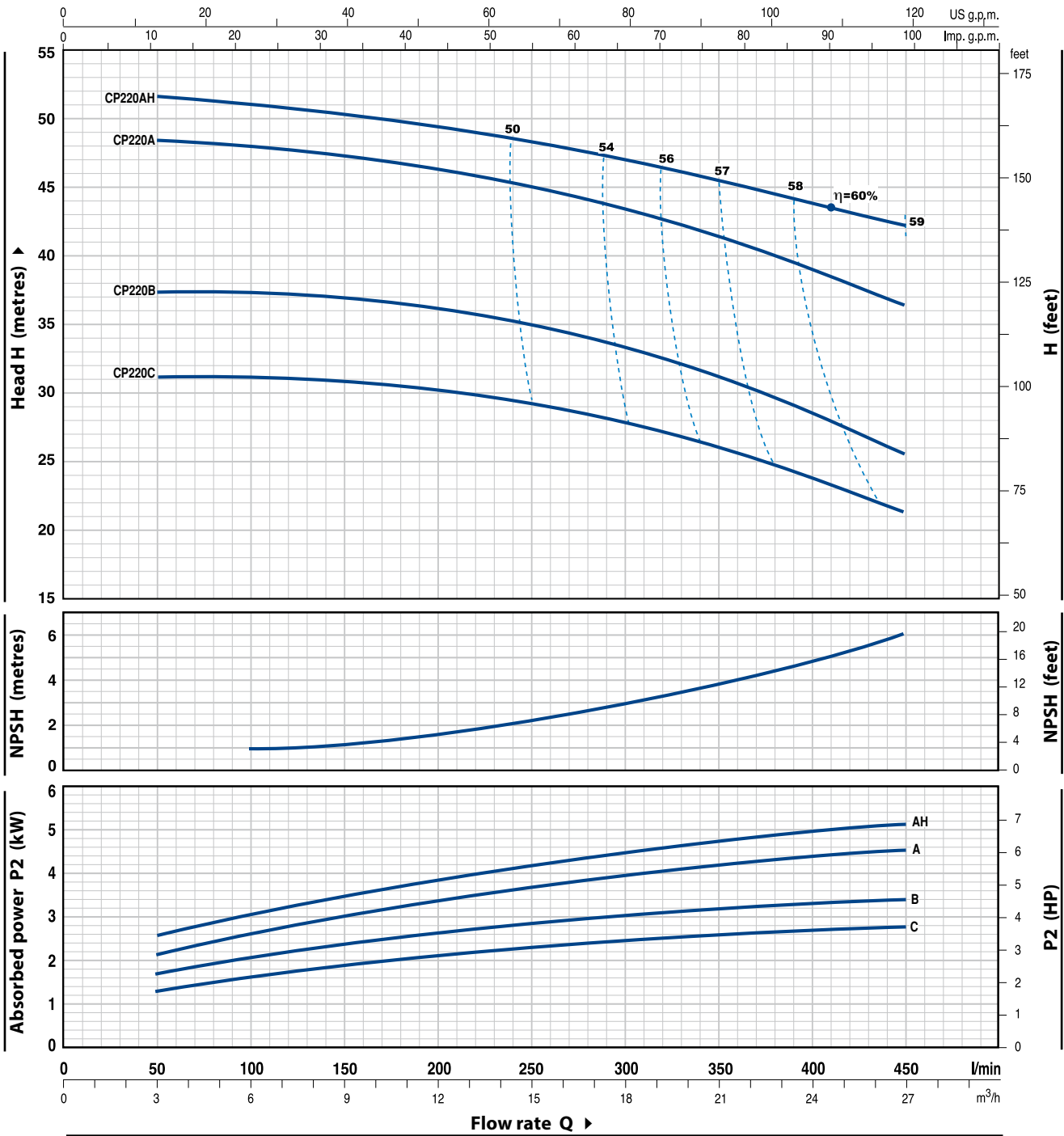
MODEL		POWER		Q	Flow rate Q															
Single-phase	Three-phase	kW	HP		m³/h	0	3	4.5	6	7.5	9	10.5	12	13.2	14.4	15	16.2	16.8		
				l/min	0	50	75	100	125	150	175	200	220	240	250	270	280			
CPm 160C	CP 160C	1.1	1.5	H metres	32	31	30.5	29.5	28	26	23	20								
CPm 160B	CP 160B	1.5	2		37	36	35.5	34.5	33.5	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 3.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 1/min HS= 0 m



MODEL		POWER		Q	Flow rate Q						
Single-phase	Three-phase	kW	HP		m ³ /h	0	3	6	12	18	24
	CP 220C	2.2	3	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

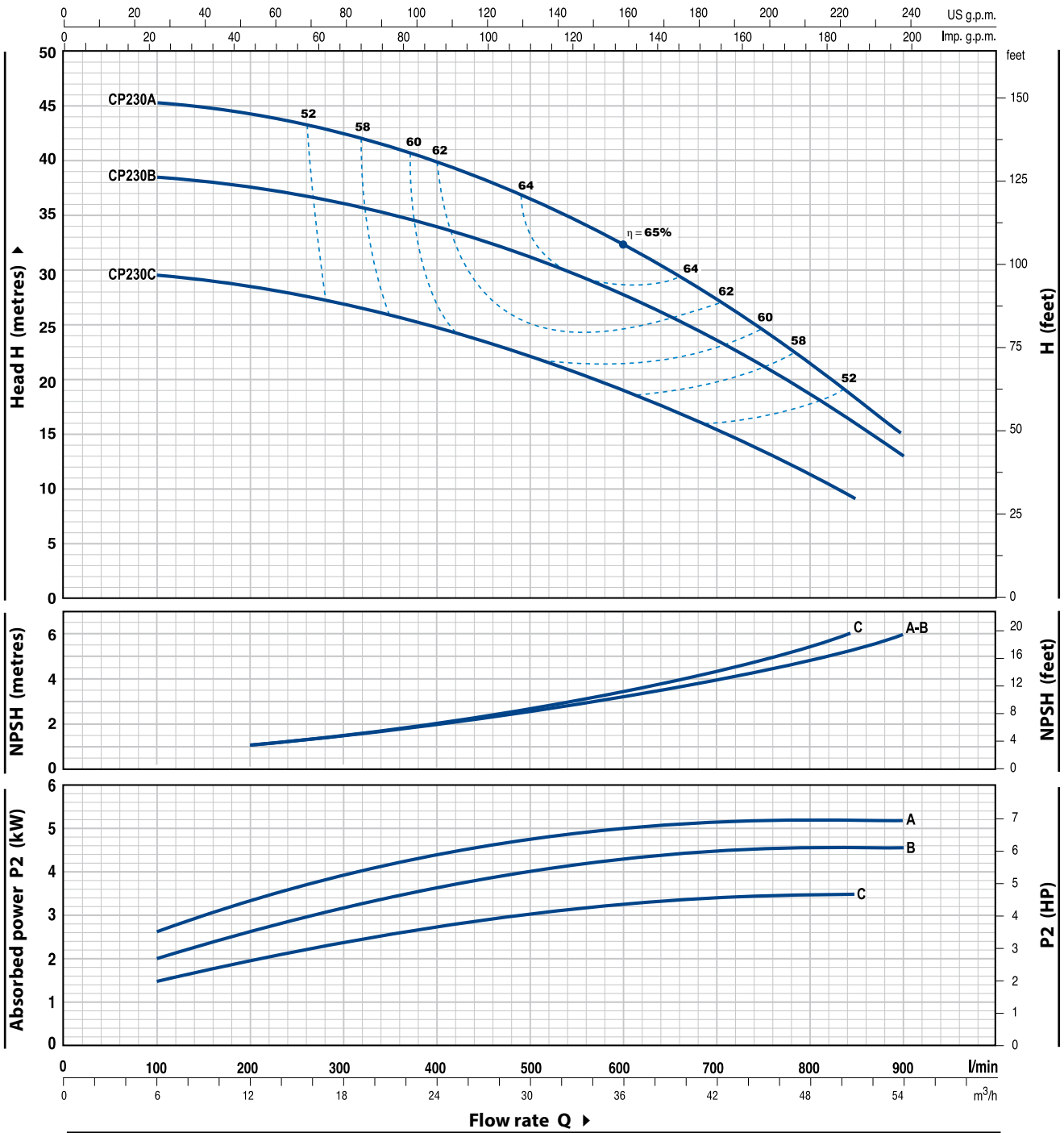
Q = Flow rate H = Total manometric head HS = Suction height

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

CP 230

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 1/min HS= 0 m



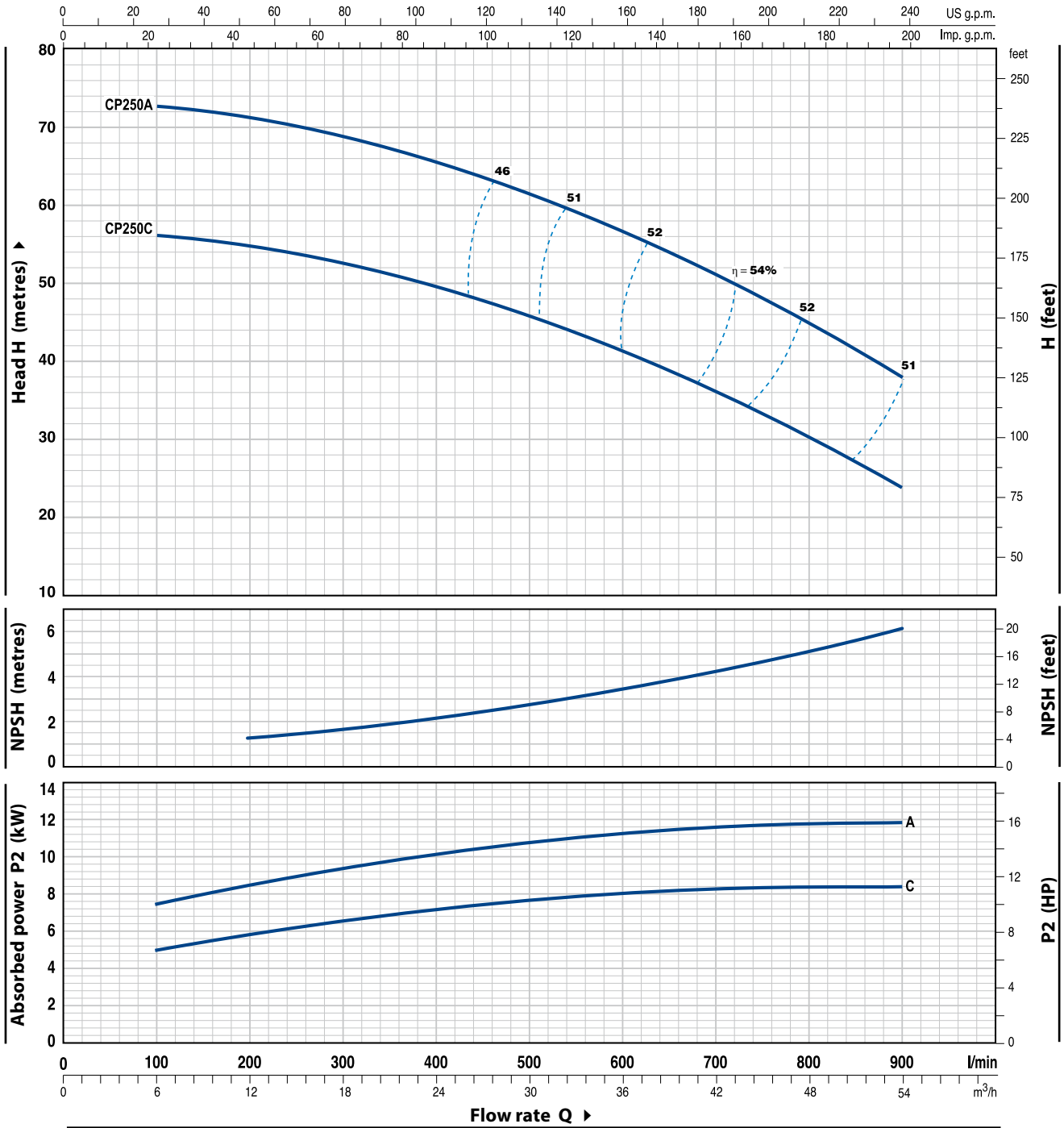
MODEL	POWER		Q	Flow rate Q											
	kW	HP		m³/h	0	6	12	18	24	30	36	42	48	51	54
Three-phase			l/min	0	100	200	300	400	500	600	700	800	850	900	
CP 230C	3	4	H metres	30	29.5	28.5	27	25	22	19.5	15.5	11.5	9		
CP 230B	4	5.5		39	38.5	38	36	34	31	28	24	18.5	15	13	
CP 230A	5.5	7.5		46	45.5	44.5	42	40	37	32.5	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 3.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 1/min HS= 0 m



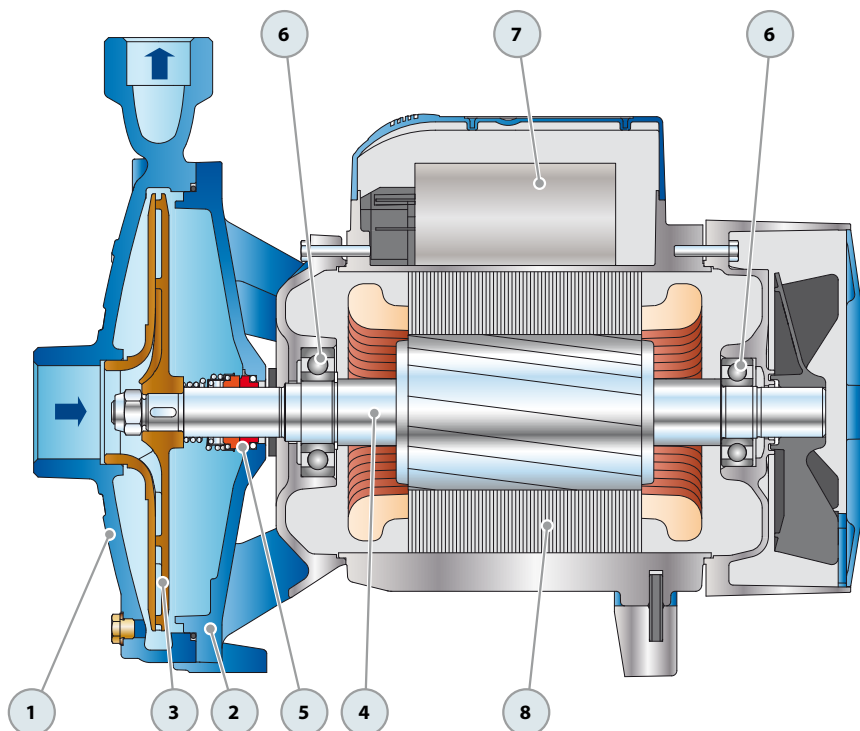
MODEL	POWER		Q	Flow rate											
	kW	HP		m³/h	0	6	12	18	24	30	36	42	48	54	
Three-phase			l/min	0	100	200	300	400	500	600	700	800	900		
CP 250C	7.5	10	H metres	57	56	54.5	52.5	49.5	46	41.5	35.5	30	24		
CP 250A	11	15		74	73	71	68	65	61	57	51	45	37		

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

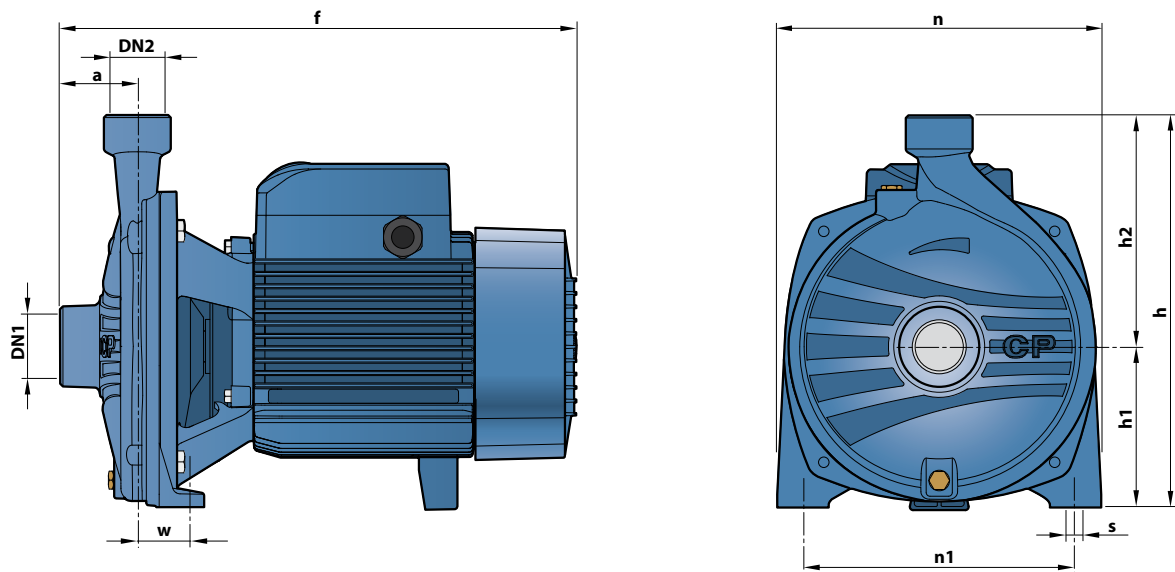
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3.

CP 160-210

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1					
2	BODY BACKPLATE	Cast iron					
3	IMPELLER	Brass					
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104					
5	MECHANICAL SEAL	Pump	Seal	Shaft	Materials		
		<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	BEARINGS	Pump	Model				
		CP 160	6204 ZZ / 6204 ZZ				
		CP 210	6206 ZZ - C3 / 6205 ZZ				
7	CAPACITOR	Pump	Capacitance				
		<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	ELECTRIC MOTOR	<p>CPm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding (up to 1.5 kW). CP: three-phase 230/400 V - 50 Hz.</p> <p>⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance</p> <p>- Insulation: F class. - Protection: IP X4.</p>					



DIMENSIONS AND WEIGHT



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

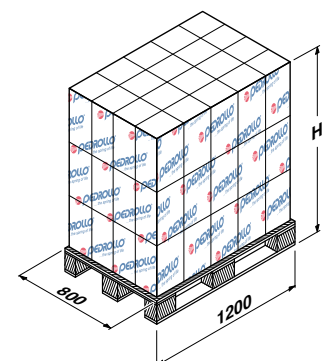
ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
CPm 160C	8.6 A	7.8 A	17.0 A
CPm 160B	10.3 A	9.8 A	21.0 A
CPm 210C	13.0 A	12.7 A	-

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
CP 160C	5.7 A	3.3 A	1.9 A	5.2 A	3.0 A	1.7 A
CP 160B	7.3 A	4.2 A	2.4 A	6.7 A	3.9 A	2.3 A
CP 160A	8.9 A	5.1 A	3.0 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

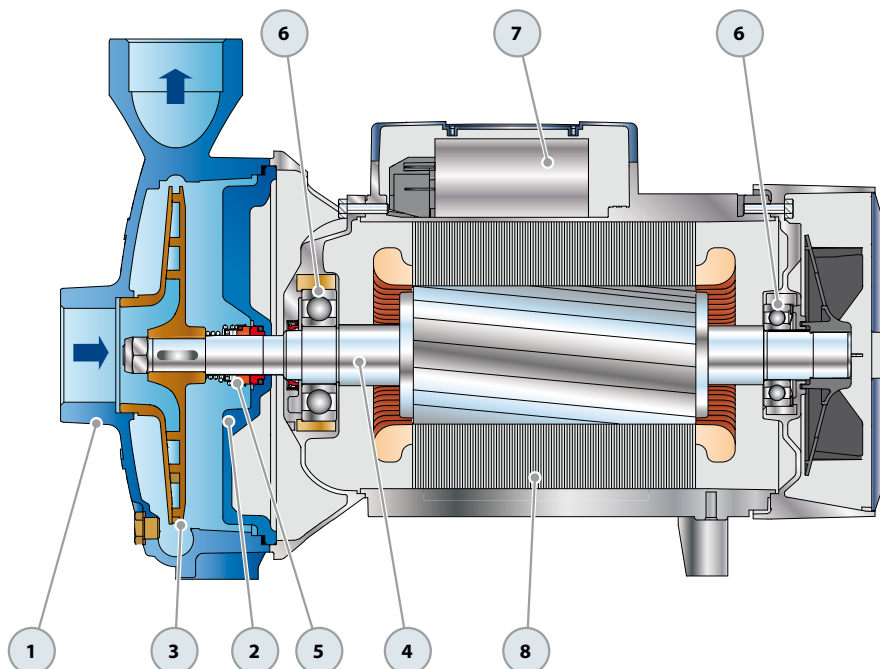
PALLETIZATION

MODEL		GROUPAGE			CONTAINER				
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
CPm 160C	CP 160C	50	1555	1009	909	70	2121	1403	1263
CPm 160B	CP 160B	50	1555	1074	1074	70	2121	1494	1494
-	CP 160A	50	1555	-	1074	70	2121	-	1494
CPm 210C	CP 210C	18	1205	492	520	-	-	-	-
-	CP 210B	18	1205	-	564	-	-	-	-
-	CP 210A	18	1205	-	600	-	-	-	-

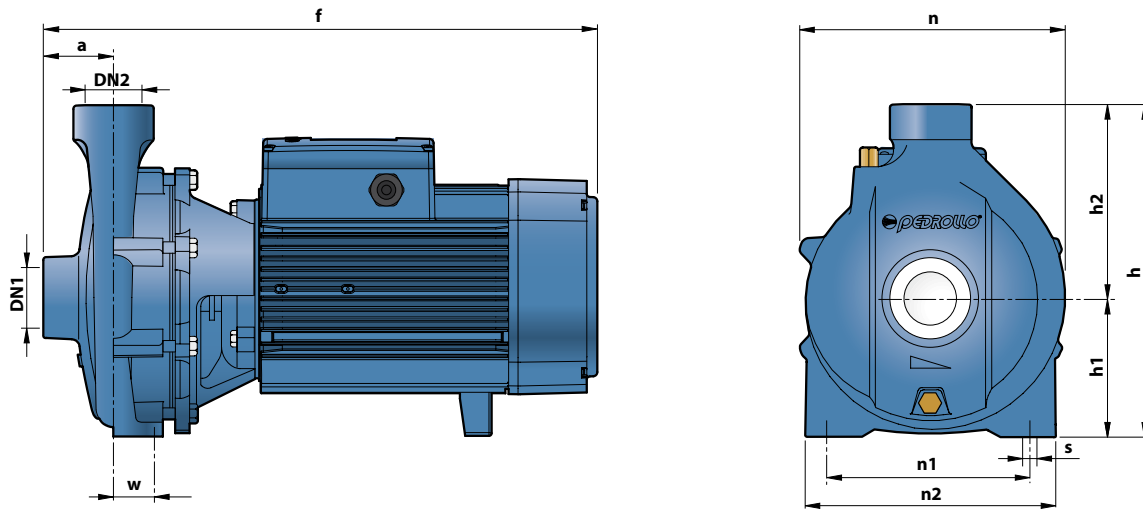


CP 220-230-250

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Cast iron				
3	IMPELLER	Brass for CP 220, CP 230 Cast iron for CP 250				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	<i>Pump Model</i>	<i>Seal Model</i>	<i>Shaft Diameter</i>	<i>Stationary ring</i>	<i>Materials</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 250C	FN-24	Ø 24 mm	Graphite	Ceramic NBR
		CP 250A	FN-32 NU	Ø 32 mm	Graphite	Ceramic NBR
		6	BEARINGS	<i>Pump Model</i>	<i>Model</i>	
		CP 220C CPm 220C CP 220B CP 230C	6206 ZZ - C3 / 6204 ZZ 6206 ZZ - C3 / 6205 ZZ			
		CP 220A-AH CP 230B-A CP 250C CP 250A	6307 ZZ - C3 / 6206 ZZ - C3 6310 ZZ - C3 / 6308 ZZ - C3			
7	CAPACITOR	<i>Pump Single-phase</i>	<i>Capacitance</i> (230 V or 240 V)			
		CPm 220C	70 µF 450 VL			
8	ELECTRIC MOTOR	CPm: single-phase 230 V - 50 Hz. CP: three-phase 230/400 V - 50 Hz up to 4 kW. 400/690 V - 50 Hz from 5.5 to 11 kW. ➔ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP X5.				



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	n	n1	n2	w	s	1~	3~
CPm 220C	CP 220C	2"	2"	70	441/409	315	132	183	255	170	230	40	14	-	-
-	CP 220B				441										
-	CP 220A				460										
-	CP 220AH				505										
-	CP 230C				441										
-	CP 230B				460										
-	CP 230A				505										
-	CP 250C				507										
-	CP 250A			571	392	160	232	322	230	294	45	-	74.0	103.0	

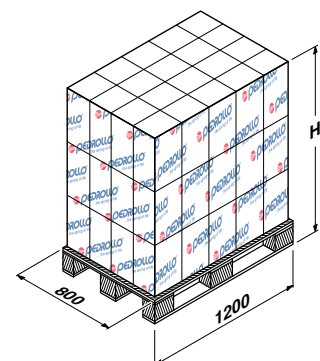
ABSORPTION

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

MODEL	VOLTAGE (three-phase)					
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	21.0 A	12.0 A	6.9 A
CP 230C	13.2 A	7.6 A	4.4 A	11.1 A	6.4 A	3.7 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 250C	28.6 A	16.5 A	9.5 A	27.5 A	16.0 A	9.3 A
CP 250A	40.8 A	23.6 A	13.7 A	40.8 A	23.6 A	13.7 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
CPm 220C	CP 220C	18	1220	598	530	24	1580	790	700
-	CP 220B	18	1180	-	608	24	1520	-	800
-	CP 220A	18	1430	-	760	24	1860	-	1000
-	CP 220AH	12	1430	-	570	16	1860	-	760
-	CP 230C	18	1200	-	598	24	1550	-	790
-	CP 230B	18	1430	-	760	24	1860	-	1000
-	CP 230A	12	1430	-	570	16	1860	-	760
-	CP 250C	6	1180	-	460	-	-	-	-
-	CP 250A	6	1180	-	640	-	-	-	-



REGULATION (EU) N. 547/2012

- Minimum efficiency index $MEI \geq 0,10$ for water pumps according to the (EU) Regulation current from the 1th of January 2013.
- The benchmark for most efficient water pumps is $MEI \geq 0,70$.
- The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- Information on benchmark efficiency is available www.europump.org/efficiencycharts.