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4" SUBMERSIBLE

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Pedrollo S.p.A. was founded in 1974. Having grown over the years to assume an international character, the company is now recognised as one of the world leaders in the domestic pump sector.

Currently the company covers an area of 80.000 m² and is characterised by its highly automated production process.

The constant quality control of the entire production cycle and the use of the most advanced technological solutions available guarantees that the products are of an extremely high quality.

Thanks to the use of the most sophisticated robots and advanced production lines available, the company is capable of producing over 2.000.000 pumps a year from a range covering over 100 different families of pumps.







Pedrollo pumps are sold in over 160 countries worldwide via a sales network capable of offering its clients the choice from a vast range of products suitable for most domestic, civil, agricultural and industrial applications.

An international sales team, composed of professionals from various parts of the world, ensures that the client is able to count on an extremely high level of service and personalised advice regarding the best solution to adopt.

The research and design department is equipped with the most advanced hardware and software available.

A modern laboratory where hydraulic tests take place, workstations where fluid-dynamic and finite element analysis is carried out, together with creativity and passion, all combine to produce new pumps and to continually improve the existing range with particular attention being paid to sturdiness and low energy consumption, thus providing each and every client with a simple and reliable product capable of providing surprising levels of performance.

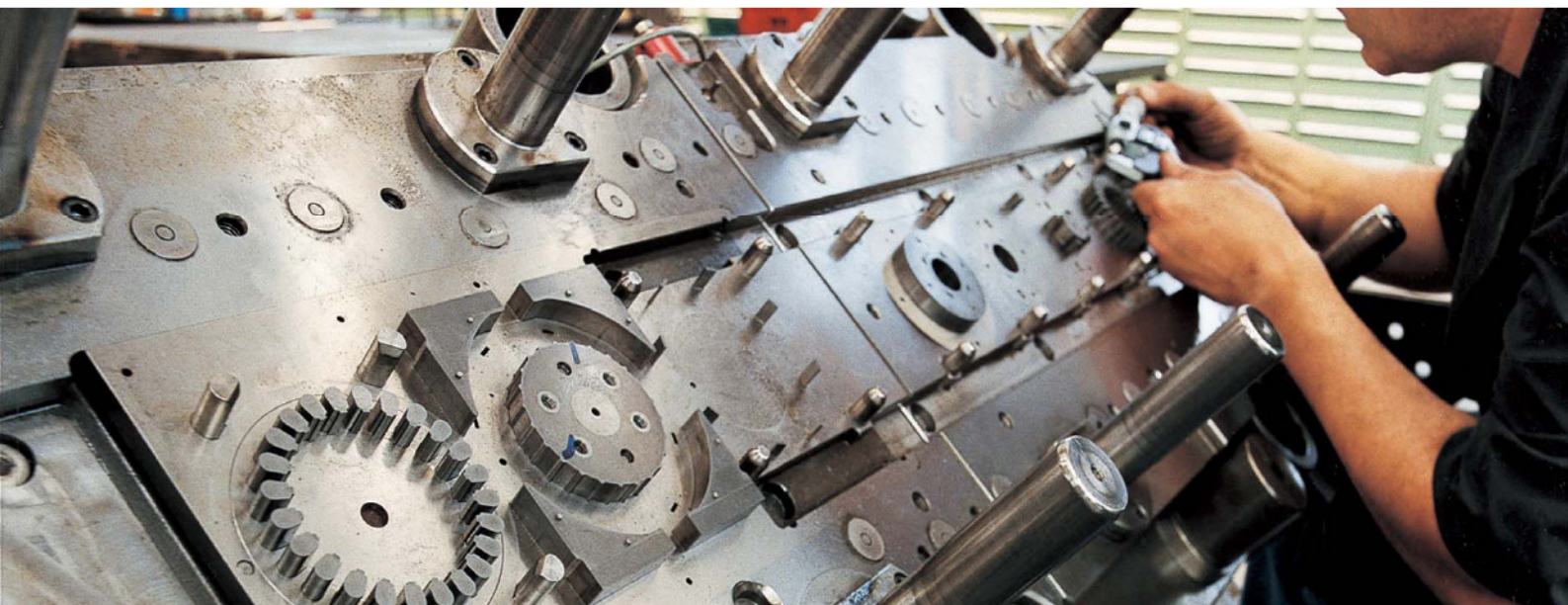






All major components are manufactured 'in house' by Pedrollo.
Starting with raw materials, the foundry, machine shop, sheet metal works and motor winding facilities, under the guidance of our QA Inspectors, produce high quality precision components at all times.



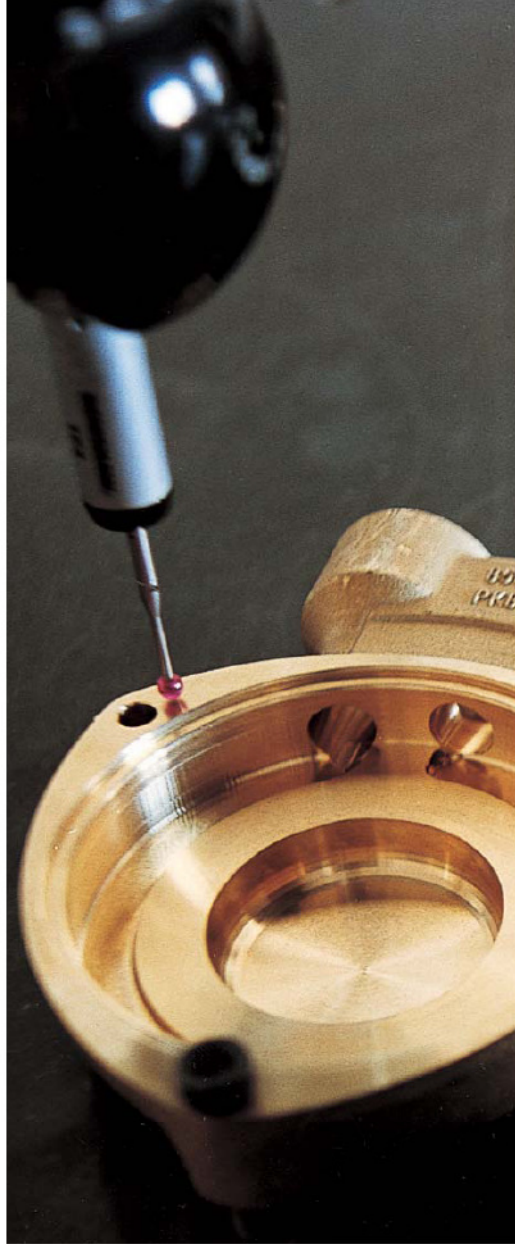






The final assembly of our pumps takes place on automated assembly lines, capable of providing a high assembly quality while carrying out automated tests at the same time, thus ensuring that the final product is produced in the shortest time possible.





Before approval is given for the production of a new pump, all new models are tested in our laboratory.

Fitted with a rig capable of reproducing the most strenuous of working conditions, the laboratory allows us to test the success of the design process.

 **PEDROLLO**[®]
... the spring of life



PERFORMANCE RANGE

- Flow rate up to **90 l/min** (5.4 m³/h)
- Head up to **100 m**

APPLICATION LIMITS

- Manometric suction lift up to **8 m**
- Liquid temperature between **-10 °C** and **+60 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure:
 - **6.5 bar** for PK 60-65-70-80
 - **10 bar** for PK 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



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use with clean water that does not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

Thanks to their reliability, the fact that they are easy to use and are economical, they are ideal for domestic use and in particular for distributing water in combination with small pressure sets and for the irrigation of gardens and allotments.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605 (reduces the risk of the impeller locking after long periods of inactivity)
- PKm 60° is a registered trade mark
- Registered Italian model n° 72753

OPTIONALS AVAILABLE ON REQUEST

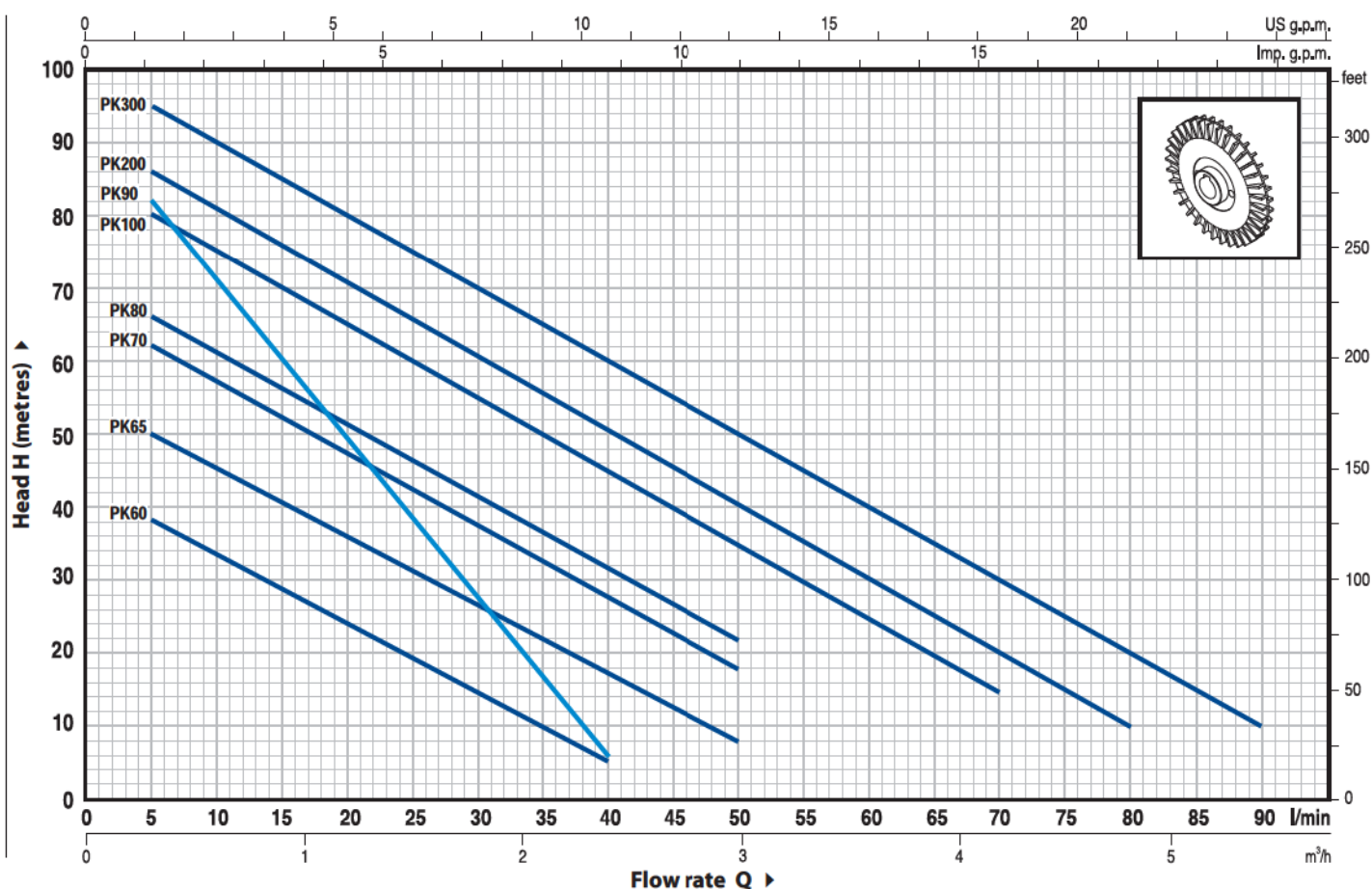
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

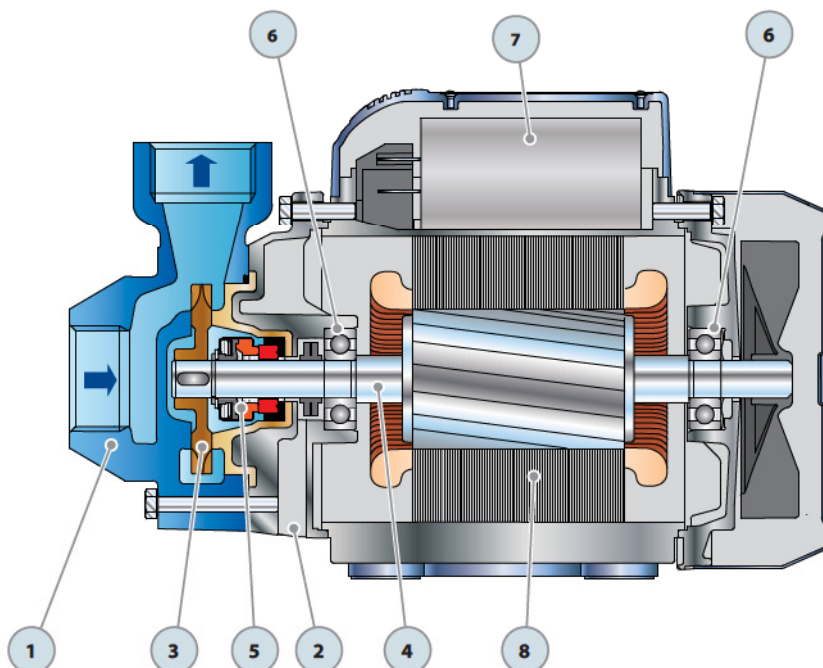


MODEL		POWER		Q m³/h l/min	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	4.2	4.8	5.4
Single-phase	Three-phase	kW	HP		0	5	10	15	20	25	30	35	40	50	60	70	80	90
PKm 60*	PK 60*	0.37	0.50	H metres	40	38	33.5	29	24	19.5	15	10	5					
PKm 65	PK 65	0.50	0.70		55	50	45.5	40.5	36	31	27	22	17	8				
PKm 70	PK 70	0.60	0.85		65	62	57	52	47	42	37	32	27	18				
PKm 80	PK 80	0.75	1		70	66	61	56	51	46	41	36.5	31	22				
PKm 90	PK 90	0.75	1		90	82	71	60	49	38	27	17	5					
PKm 100	PK 100	1.1	1.5		85	80	75	70	65	60	55	50	45	35	25	15		
PKm 200	PK 200	1.5	2		90	86	81	76	71	65.5	60	55	50	40	30	20	10	
-	PK 300	2.2	3		100	95	90	85	80	75	70	65	60	50	40	30	20	10

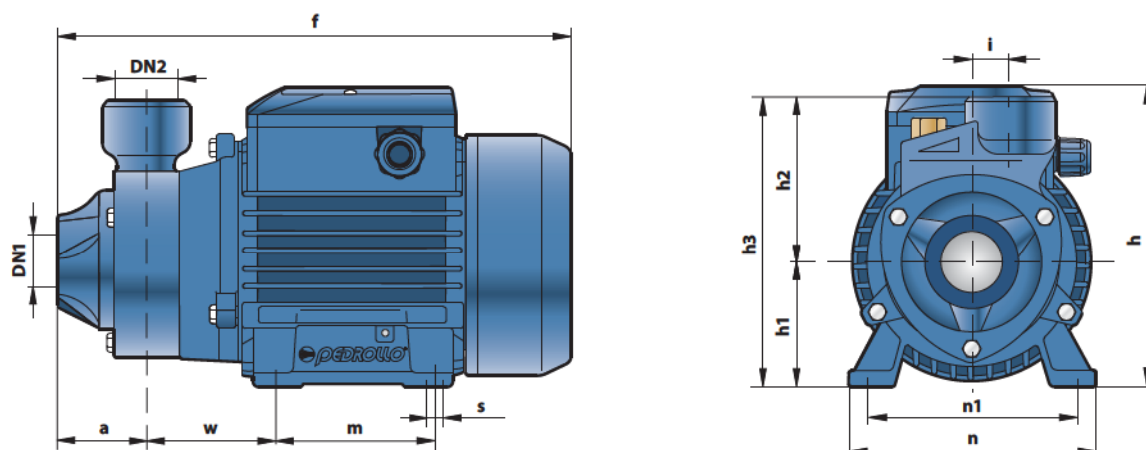
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, complete 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	<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>
		PK 60-65-70-80	AR-12	Ø 12 mm	Ceramic	Graphite	NBR
		PK 90	FN-12	Ø 12 mm	Ceramic	Graphite	NBR
		PK 100-200-300	FN-14	Ø 14 mm	Graphite	Ceramic	NBR
6	BEARINGS	<i>Pump</i>	<i>Model</i>				
		PK 60-65	6201 ZZ / 6201 ZZ				
		PK 70-80-90	6203 ZZ / 6203 ZZ				
		PK 100-200-300	6204 ZZ / 6204 ZZ				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>		
		PKm 60	10 µF 450 VL	25 µF 250 VL			
		PKm 65	14 µF 450 VL	30 µF 250 VL			
		PKm 70	16 µF 450 VL	60 µF 300 VL			
		PKm 80	20 µF 450 VL	60 µF 300 VL			
		PKm 90	20 µF 450 VL	60 µF 300 VL			
		PKm 100	31.5 µF 450 VL	60 µF 250 VL			
		PKm 200	45 µF 450 VL	80 µF 250 VL			
8	ELECTRIC MOTOR	PKm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding.					
		PK: three-phase 230/400 V - 50 Hz.					
		⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance					
		– Insulation: F class.					
		– Protection: IP 44.					



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~										
PKm 60*	PK 60*	1"	1"	42	245	152	63	75	138	20	80	120	100	55	7	5.3	5.3										
PKm 65	PK 65			55	285	180	71	80	143							6.9	6.4										
PKm 70	PK 70							85	156							10.1	9.0										
PKm 80	PK 80							95	166							10.1	9.0										
PKm 90	PK 90	¾"	¾"	58	282	212	80	94	174	20	90	140	112	62	9	10.2	9.2										
PKm 100	PK 100	1"	1"	55	350											100	164	125	85	9	14.4	12.4					
PKm 200	PK 200																				15.5	13.4					
—	PK 300																				—	15.6					

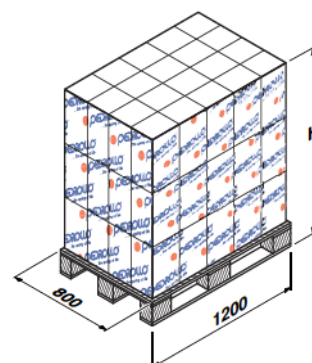
ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
Single-phase			
PKm 60*	2.5 A	2.4 A	5.5 A
PKm 65	3.7 A	3.4 A	7.4 A
PKm 70	5.2 A	4.8 A	10.8 A
PKm 80	5.2 A	4.8 A	10.8 A
PKm 90	5.6 A	5.1 A	11.5 A
PKm 100	9.0 A	8.2 A	18.0 A
PKm 200	11.5 A	11.0 A	24.0 A

MODEL	VOLTAGE (three-phase)				
	230 V	400 V	690 V	240 V	415 V
Three-phase					
PK 60*	2.0 A	1.15 A	-	1.9 A	1.1 A
PK 65	3.0 A	1.7 A	-	2.8 A	1.6 A
PK 70	3.8 A	2.2 A	-	3.3 A	1.9 A
PK 80	3.8 A	2.2 A	-	3.3 A	1.9 A
PK 90	4.0 A	2.3 A	-	3.8 A	2.2 A
PK 100	6.2 A	3.6 A	2.05 A	5.7 A	3.3 A
PK 200	7.6 A	4.4 A	2.5 A	7.0 A	4.0 A
PK 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	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
PKm 60*	PK 60*	216	1420	1170	1170	324	2050	1740	1740
PKm 65	PK 65	216	1440	1510	1400	243	1600	1700	1580
PKm 70	PK 70	120	1300	1230	1100	180	1870	1840	1640
PKm 80	PK 80	120	1300	1230	1100	180	1870	1840	1640
PKm 90	PK 90	120	1300	1250	1130	180	1870	1860	1680
PKm 100	PK 100	72	1520	1060	910	84	1750	1230	1060
PKm 200	PK 200	72	1520	1140	990	84	1750	1320	1150
-	PK 300	72	1520	-	1140	84	1750	-	1330





PERFORMANCE RANGE

- Flow rate up to **50 l/min** (3 m³/h)
- Head up to **70 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+60 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6.5 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



INSTALLATION AND USE

Suitable for use with clean water that does not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

As a result of their compactness, reliability and the fact that they are easy to use, they are suitable for use in domestic applications such as the distribution of water in combination with small pressure sets, for the irrigation of gardens and allotments, for drawing water from tanks and for all those other situations where air or water may be present in the water to be pumped. The pump comes complete with a flap-check valve.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605
- Registered Italian model n° 72753

OPTIONALS AVAILABLE ON REQUEST

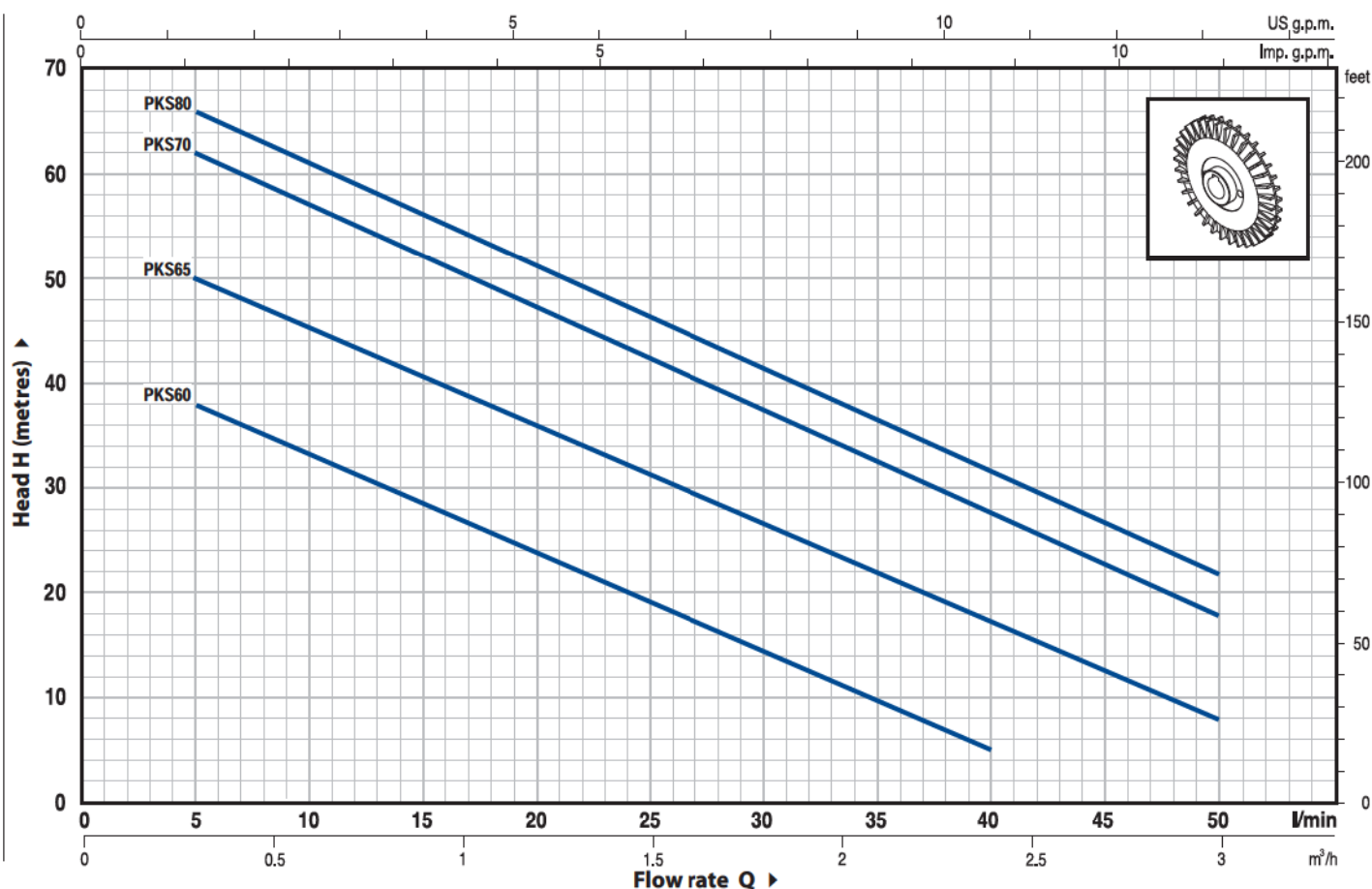
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

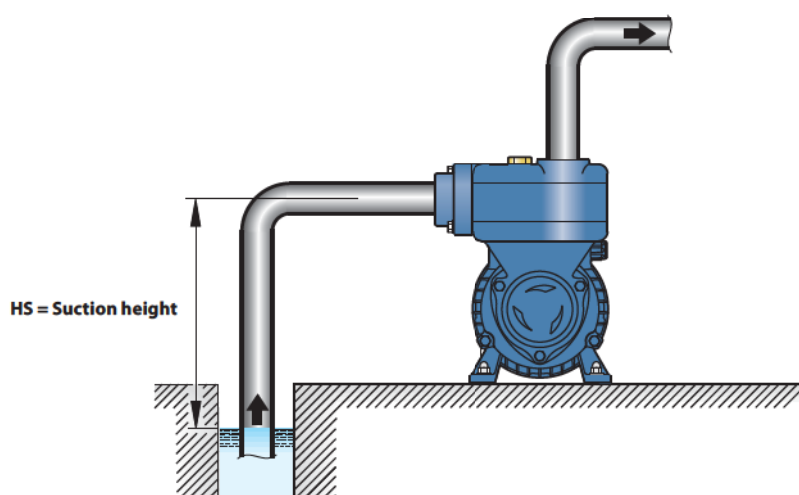


MODEL		POWER		Q													
Single-phase	Three-phase	kW	HP		m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	
PKSm 60	PKS 60	0.37	0.50	H metres	l/min	0	5	10	15	20	25	30	35	40	45	50	
PKSm 65	PKS 65	0.50	0.70			40	38	33.5	29	24	19.5	15	10	5			
PKSm 70	PKS 70	0.60	0.85			55	50	45.5	40.5	36	31	27	22	17	12.5	8	
PKSm 80	PKS 80	0.75	1			65	62	57	52	47	42	37	32	27	22	18	
						70	66	61	56	51	46	41	36.5	31	27	22	

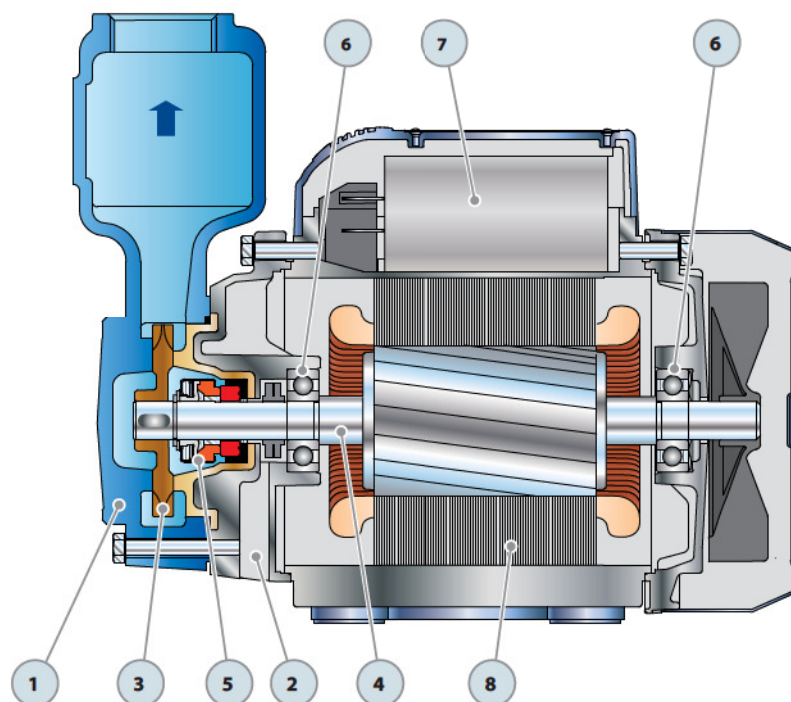
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

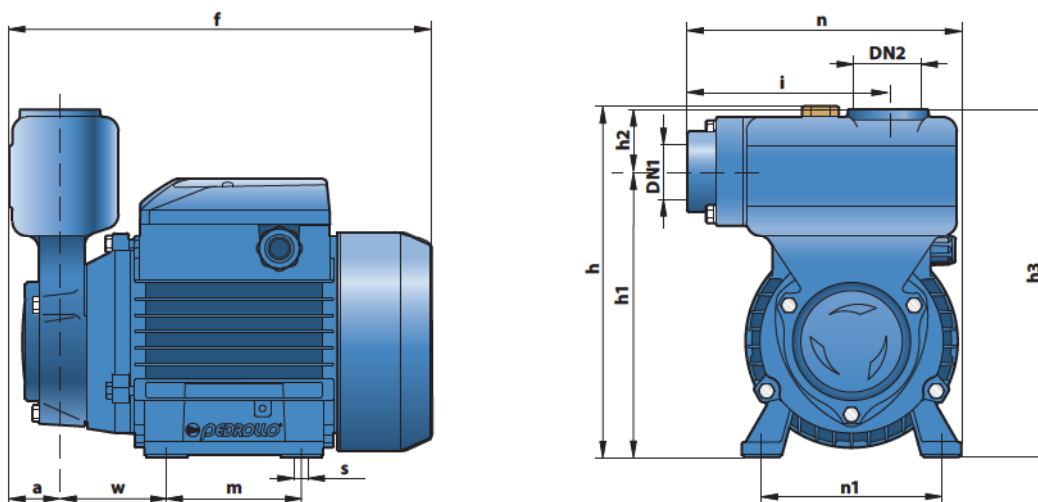
INSTALLATION EXAMPLE



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1 and the suction port with built-in flap-check valve				
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	<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>
		AR-12	Ø 12 mm	Ceramic	Graphite	NBR
6	BEARINGS	<i>Pump</i>	<i>Model</i>			
		PKS 60-65	6201 ZZ / 6201 ZZ			
		PKS 70-80	6203 ZZ / 6203 ZZ			
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>		
		PKSm 60	10 µF 450 VL	25 µF 250 VL		
		PKSm 60	14 µF 450 VL	30 µF 250 VL		
		PKSm 70	16 µF 450 VL	60 µF 250 VL		
		PKSm 80	20 µF 450 VL	60 µF 250 VL		
8	ELECTRIC MOTOR	PKSm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PKS: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
PKSm 60	PKS 60	1"	1"	29	230	192	156	34	190	110	80	150	100	55	7	6.0	6.0
PKSm 65	PKS 65				260	200	164		198		90	160	112	62		7.5	7.0
PKSm 70	PKS 70															10.6	9.7
PKSm 80	PKS 80															10.6	9.7

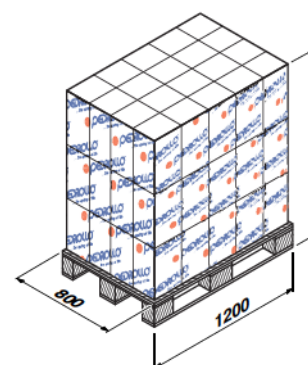
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PKSm 60	2.5 A	2.4 A	5.5 A
PKSm 65	3.7 A	3.4 A	7.4 A
PKSm 70	5.2 A	4.8 A	10.8 A
PKSm 80	5.2 A	4.8 A	10.8 A

MODEL	VOLTAGE (three-phase)			
Three-phase	230 V	400 V	240 V	415 V
PKS 60	2.0 A	1.15 A	1.9 A	1.1 A
PKS 65	3.0 A	1.7 A	2.8 A	1.6 A
PKS 70	3.8 A	2.2 A	3.3 A	1.9 A
PKS 80	3.8 A	2.2 A	3.3 A	1.9 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
PKSm 60	PKS 60	189	1570	1155	1155	243	1970	1480	1480
PKSm 65	PKS 65	189	1570	1440	1340	243	1970	1840	1720
PKSm 70	PKS 70	105	1300	1130	1040	168	1980	1800	1650
PKSm 80	PKS 80	105	1300	1130	1040	168	1980	1800	1650





PERFORMANCE RANGE

- Flow rate up to **90 l/min** (5.4 m³/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**
- Max. working pressure:
 - **6 bar** for PQ 60-65
 - **10 bar** for PQ 70-80-81-90-100-200-300
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use with clean water that does not contain abrasive particles and 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 at least sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605
- Registered Italian model n° 72753

OPTIONALS AVAILABLE ON REQUEST

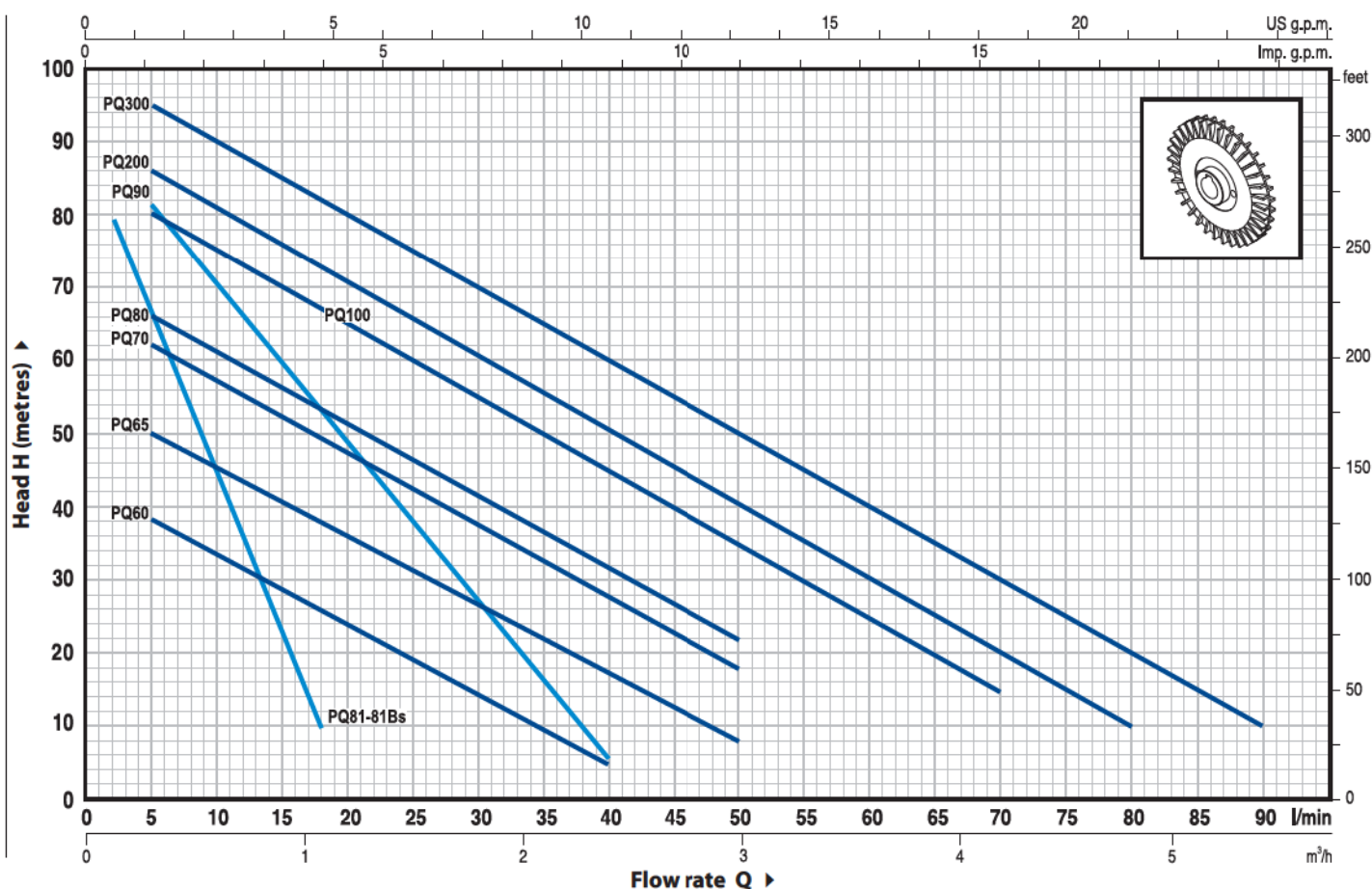
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL		POWER		Q																	
Single-phase	Three-phase	kW	HP		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		
					l/min	0	5	10	15	20	25	30	35	40	50	60	70	80	90		
PQm 60	PQ 60	0.37	0.50	H metres	40	38	33.5	29	24	19.5	15	10	5								
PQm 65	PQ 65	0.50	0.70		55	50	45.5	40.5	36	31	27	22	17	8							
PQm 70	PQ 70	0.60	0.85		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			

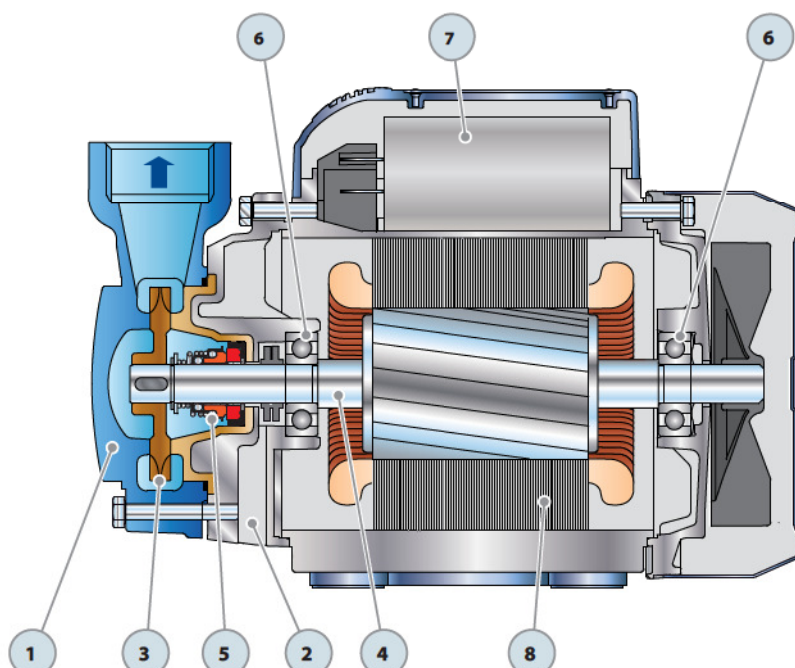
MODEL		POWER		Q	m³/h	0	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.08
Single-phase	Three-phase	kW	HP		l/min	0	2	4	6	8	10	12	14	16	18
PQm 81	PQ 81	0.50	0.70	H metres	90	80	71	63	54	45	37	28	19	10	
POm 81-Bs	PO 81-Bs	0.50	0.70		90	80	71	63	54	45	37	28	19	10	

⇒ PQ 81 Bs= version with brass pump body

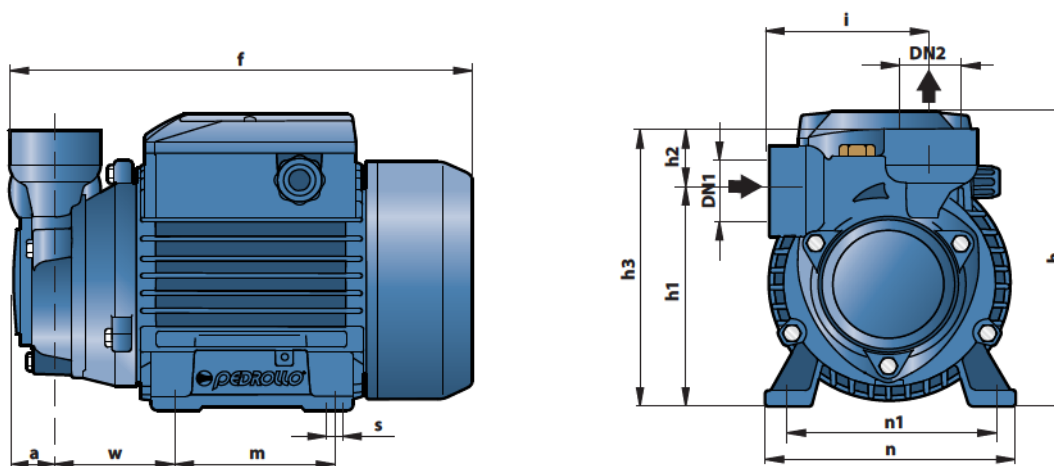
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron (brass for PQ 81-Bs), complete 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		
		<i>Model</i>	<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>
		PQ 60-65	AR-12	Ø 12 mm	Ceramic	Graphite	NBR
		PQ 70-80-81-81Bs-90	FN-12	Ø 12 mm	Ceramic	Graphite	NBR
		PQ 100-200-300	FN-14	Ø 14 mm	Graphite	Ceramic	NBR
6	BEARINGS	Pump	Model				
		PQ 60-65-81-81Bs	6201 ZZ / 6201 ZZ				
		PQ 70-80-90	6203 ZZ / 6203 ZZ				
		PQ 100-200-300	6204 ZZ / 6204 ZZ				
7	CAPACITOR	Pump	Capacitance				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>			
		PQm 60	10 µF 450 VL	25 µF 250 VL			
		PQm 65	14 µF 450 VL	30 µF 250 VL			
		PQm 70	16 µF 450 VL	60 µF 300 VL			
		PQm 80	20 µF 450 VL	60 µF 300 VL			
		PQm 81 - 81Bs	14 µF 450 VL	30 µF 250 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 230 V - 50 Hz with thermal overload protector built-in to the winding. PQ: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.					



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	225	152	108	30	138	78	80	120	100	55	7	5.1	5.1				
PQm 65	PQ 65						113		143					57		6.6	6.1				
PQm 70	PQ 70						121		151					90		138	112	62		9.7	9.0
PQm 80	PQ 80				255	180														9.7	9.0
PQm 81	PQ 81	½"	½"	18	220	152	119	23	141	71	80	120	100	58	9	6.6	6.2				
PQm 81-Bs	PQ 81-Bs	½"	½"	18												6.5	6.1				
PQm 90	PQ 90	¾"	¾"	22												9.9	8.8				
PQm 100	PQ 100	1"	1"	25	318	212	140	30	170	89	100	164	125	85	9	14.1	12.2				
PQm 200	PQ 200															15.2	14.1				
—	PQ 300															—	15.2				

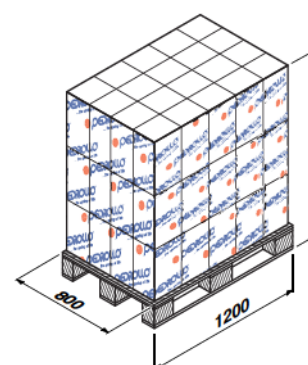
ABSORPTION

MODEL	VOLTAGE (single-phase)		
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	10.8 A
PQm 81	3.4 A	2.7 A	5.8 A
PQm 81-Bs	3.4 A	2.7 A	5.8 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)				
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
PQm 81	2.2 A	1.3 A	-	2.0 A	1.15 A
PQm 81-Bs	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	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
PQm 60	PQ 60	240	1440	1250	1250	270	1600	1400	1400
PQm 65	PQ 65	240	1440	1600	1490	270	1600	1800	1670
PQm 70	PQ 70	120	1270	1190	1100	180	1850	1770	1640
PQm 80	PQ 80	120	1280	1190	1100	180	1850	1770	1640
PQm 81	PQ 81	192	1460	1290	1210	264	1960	1760	1660
PQm 81-Bs	PQ 81-Bs	192	1460	1270	1190	264	1960	1740	1630
PQm 90	PQ 90	120	1280	1210	1080	180	1850	1800	1610
PQm 100	PQ 100	72	1510	1040	900	96	1970	1380	1190
PQm 200	PQ 200	72	1510	1120	1040	96	1970	1480	1380
-	PQ 300	72	1510	-	1120	96	1970	-	1480



PQ 3000

Pump with peripheral impeller



PERFORMANCE RANGE

- Flow rate up to **50 l/min** (3 m³/h)
- Head up to **180 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**
- Max. working pressure **18 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



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. The hydraulic characteristics of this pump, coupled with its compactness, make it suitable for use in the industrial applications. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605

OPTIONALS AVAILABLE ON REQUEST

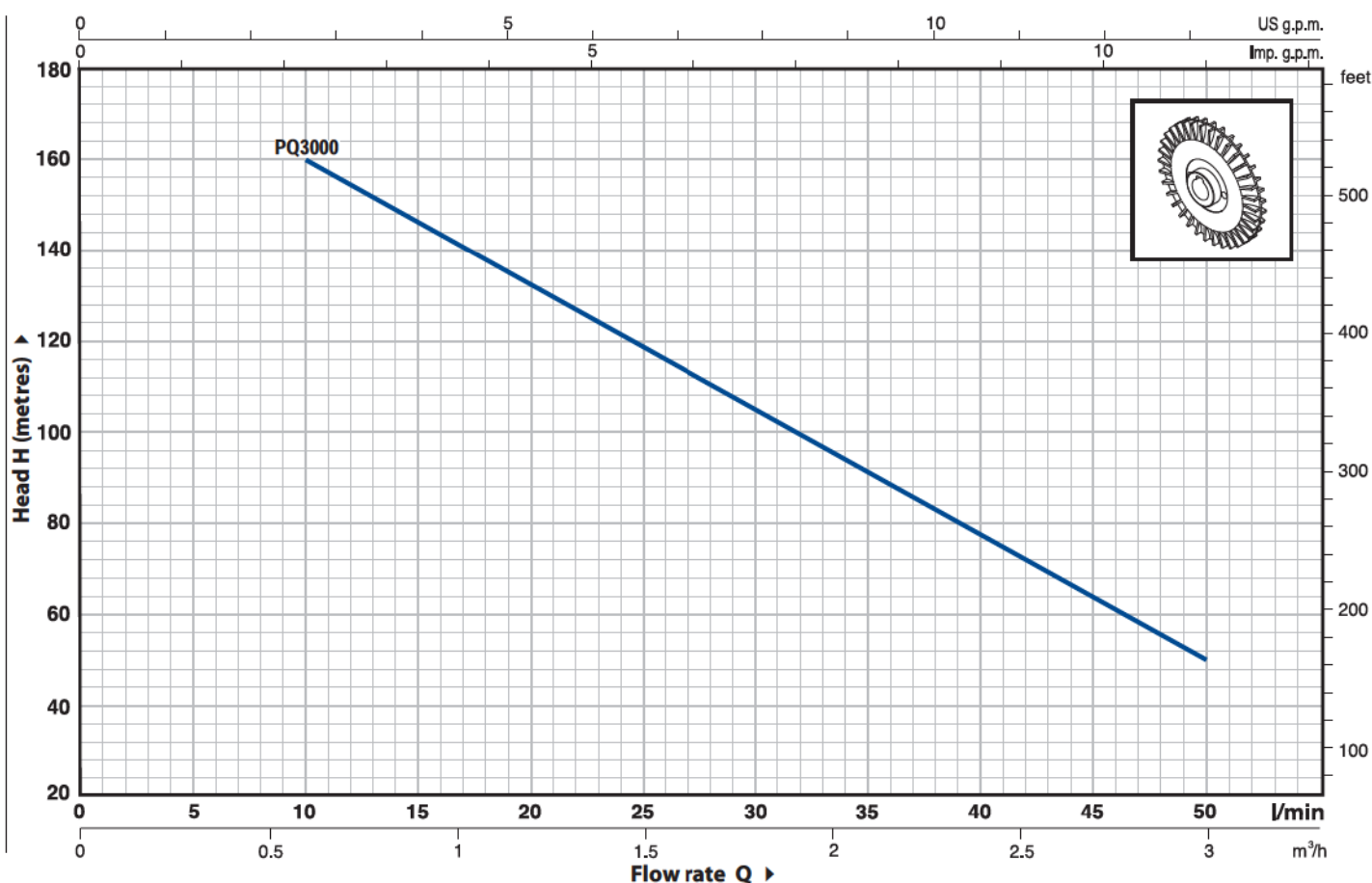
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

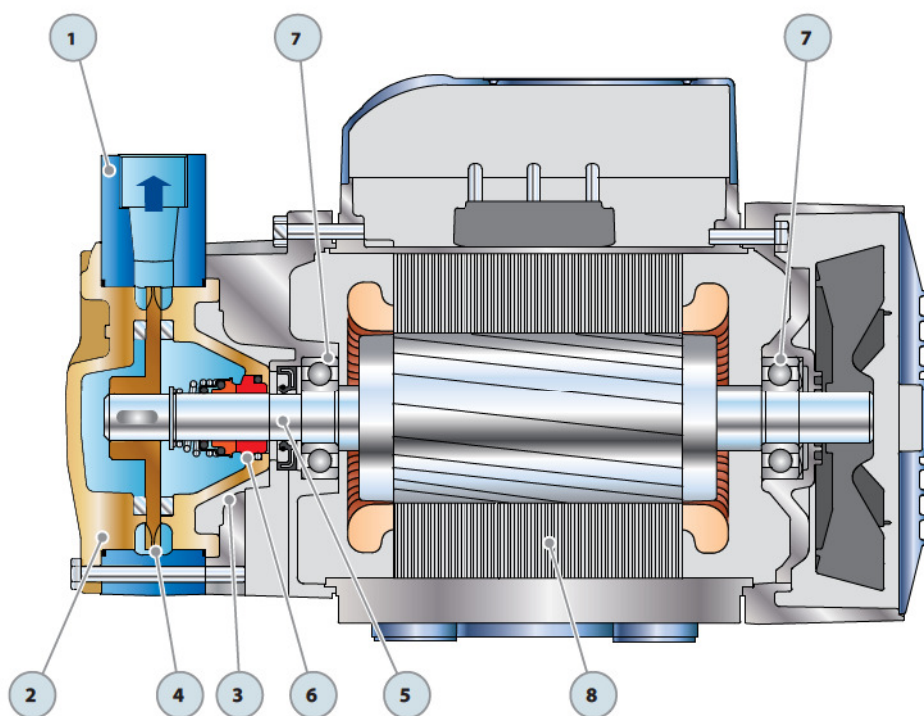


MODEL	POWER		Q	0	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0
	kW	HP		0	10	15	20	25	30	35	40	45	50
PQ 3000	2.2	3	H metres	180	160	145	132	118	105	92	78	63.5	50

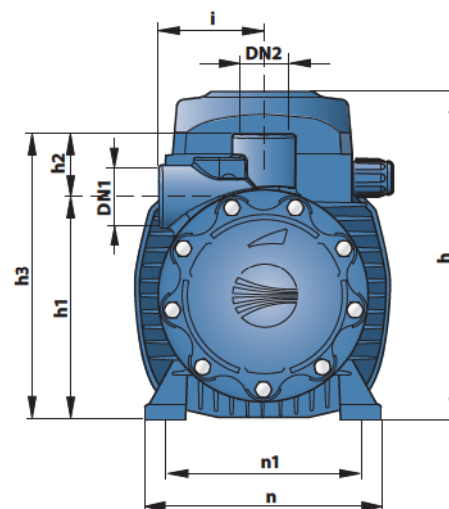
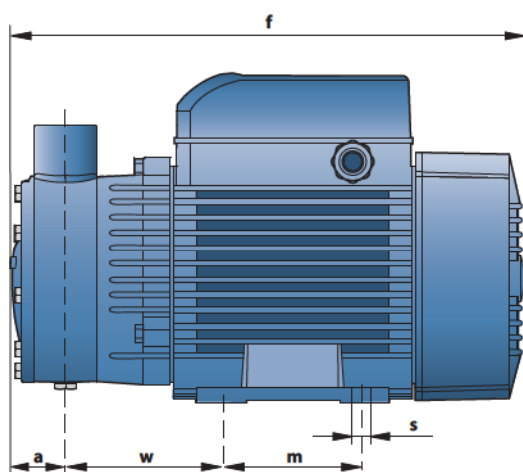
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY PLATE	Brass, with stainless steel shim disc				
3	MOTOR BRACKET	Aluminium, with brass insert and stainless steel shim disc that reduces the risk of impeller seizure				
4	IMPELLER	Bronze, with peripheral radial vanes				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	<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>
		FN-18 NU	Ø 18 mm	Graphite	Ceramic	NBR
7	BEARINGS	6204 ZZ - C3 / 6204 ZZ - C3				
8	ELECTRIC MOTOR	PQ 3000: three-phase 230/400 V - 50 Hz. ⇒ Pump fitted with the three-phase motor option offers IE2 (IEC 60034-30) class high performance – Insulation: H class. – Protection: IP 55.				



DIMENSIONS AND WEIGHT



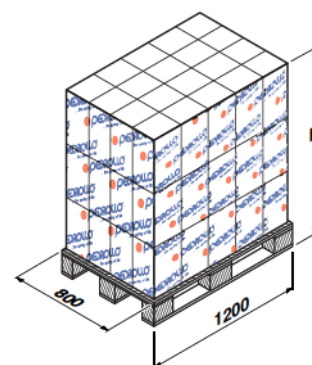
MODEL	PORTS		DIMENSIONS mm												kg
	DN1	DN2	a	f	h	h1	h2	h3	i	m	n	n1	w	s	
Three-phase															3~
PQ 3000	3/4"	3/4"	34	329	212	142	38	180	65	100	164	125	97	9	18.8

ABSORPTION

MODEL	VOLTAGE (three-phase)			
	230 V	400 V	240 V	415 V
PQ 3000	11.5 A	6.6 A	10.8 A	6.2 A

PALLETIZATION

MODEL	GROUPAGE			CONTAINER		
	n° pumps	H (mm)	kg	n° pumps	H (mm)	kg
PQ 3000	72	1840	1380	84	2114	1600





PERFORMANCE RANGE

- Flow rate up to **10 l/min** (0.6 m³/h)
- **50 Hz**: head up to **42 m**
- **60 Hz**: head up to **55 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**
- Max. working pressure **10 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



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. The design of this particularly compact brass pump offers an effective guarantee against the formation of rust and oxidation; as a result they are recommended for use in industrial applications such as cooling and conditioning.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patented n° IT1243605
- Registered Community Design n° 342159-0002

OPTIONALS AVAILABLE ON REQUEST

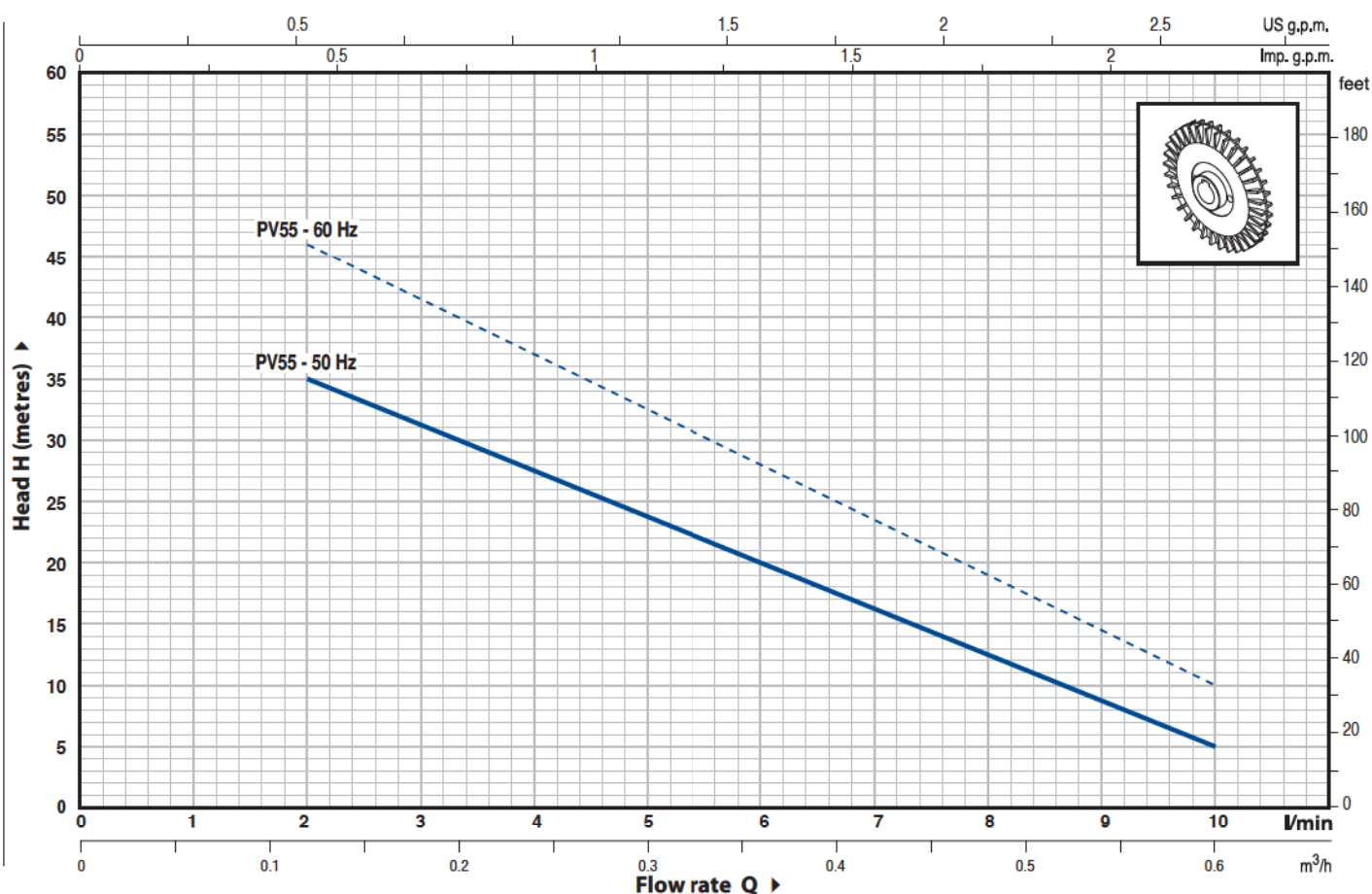
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50/60 Hz n= 2900/3450 1/min HS= 0 m



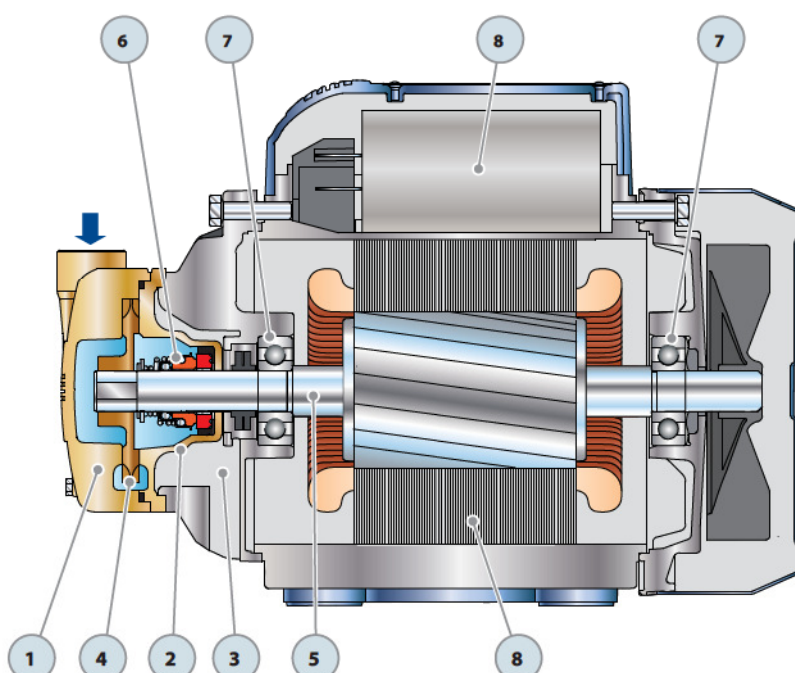
MODEL		POWER		Q	m³/h	0	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54	0.60
Single-phase	Three-phase	kW	HP		l/min	0	2	3	4	5	6	7	8	9	10
PVm 55	PV 55	0.18	0.25	H metres	50 Hz	42	35	31	27.5	24	20.5	16	12.5	9	5
					60 Hz	55	46	41.5	37	32.5	28	23.5	19	14.5	10

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

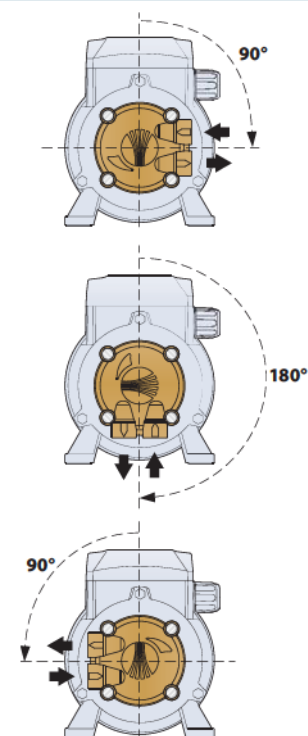
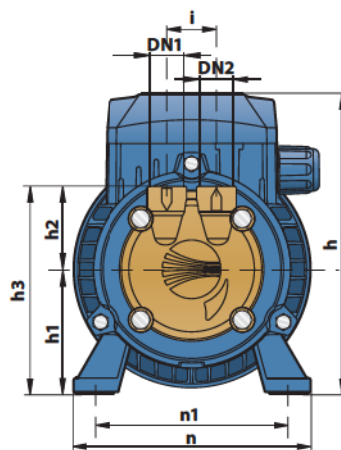
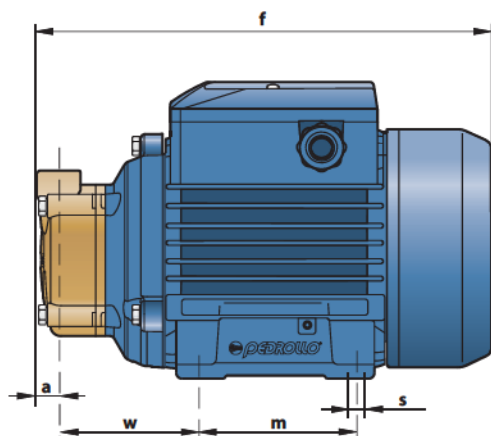
Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

⇒ The PV 55 pump is designed to work at 50 Hz and 60 Hz (see the characteristic curves)

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Brass, with threaded ports in compliance with ISO 228/1				
2	PUMP BODY BACK-PLATE	Brass				
3	MOTOR BRACKET	Aluminium				
4	IMPELLER	Brass, with peripheral radial vanes				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		PNL-12E	Ø 12 mm	Ceramic	Graphite	EPDM
7	BEARINGS	6201 ZZ / 6201 ZZ				
8	CAPACITOR	Capacitance				
		230÷240 V (50÷60 Hz)	110 V (50÷60 Hz)			
		10 µF 450 VL	25 µF 250 VL			
9	ELECTRIC MOTOR	PV_m: single-phase 230 V - 50÷60 Hz with thermal overload protector built-in to the winding. PV: three-phase 230/400 V - 50÷60 Hz. ⇒ Pump fitted with the three-phase motor option offers IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



DIMENSIONS AND WEIGHT



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	f	h	h1	h2	h3	i	m	n	n1	w	s	1~	3~
PVm 55	PV 55	1/4"	1/4"	11	223	152	63	42	105	25	80	120	100	65	7	4.6	4.6

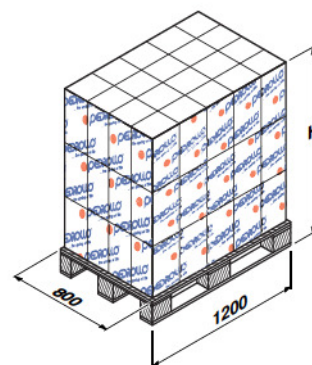
ABSORPTION

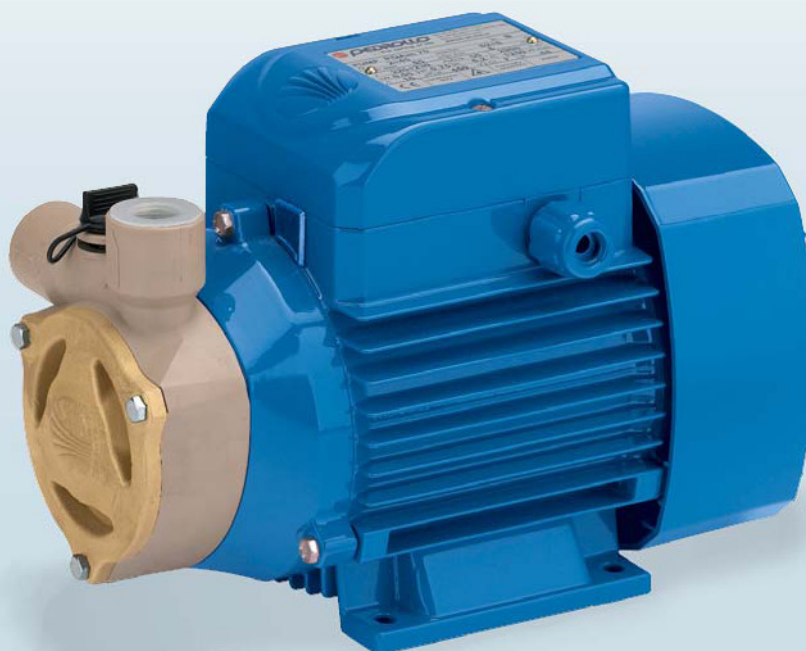
MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PVm 55 (50Hz)	1.6 A	1.5 A	3.2 A
PVm 55 (60Hz)	2.0 A	1.9 A	4.0 A

MODEL	VOLTAGE (three-phase)	
Three-phase	230 V	400 V
PV 55 (50Hz)	1.7 A	1.0 A
PV 55 (60Hz)	1.7 A	1.0 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
PVm 55	PV 55	192	1460	910	910	264	1960	1240	1240





PERFORMANCE RANGE

- Flow rate up to **50 l/min** (3 m³/h)
- Head up to **90 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**
- Max. working pressure **10 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



AN30



YpTECT-003

INSTALLATION AND USE

Suitable for use with clean water that does not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

The RYTON and brass pump body construction guarantees against the formation of rust and oxidation. As a result of these characteristics these pumps are suitable for use in industrial applications such as cooling, conditioning and boiler feed.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patented n° IT1243605
- Registered Community Design n° 342159-001

OPTIONALS AVAILABLE ON REQUEST

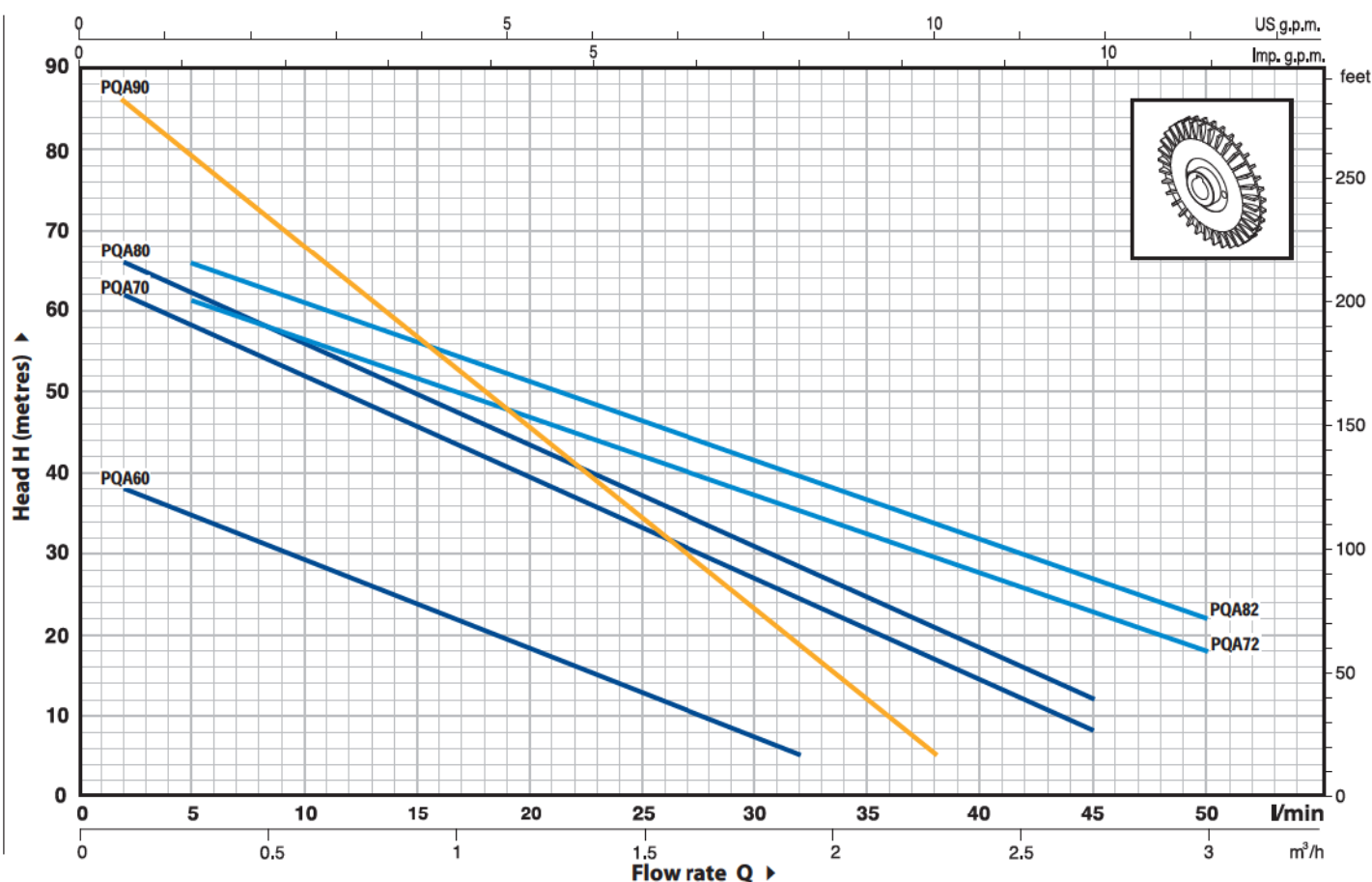
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

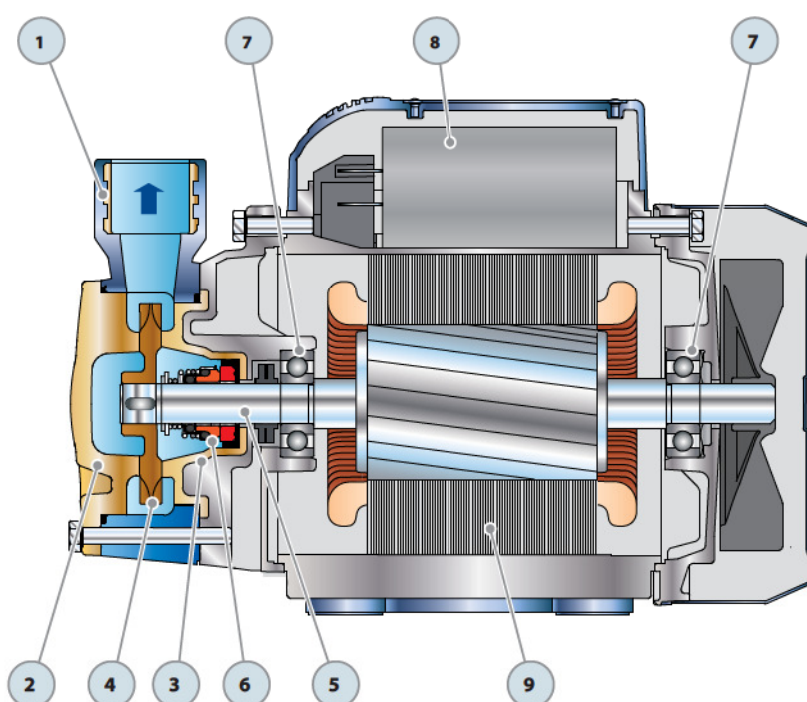


MODEL		POWER		Q													
Single-phase	Three-phase	kW	HP		m³/h	0	0.1	0.3	0.6	0.9	1.2	1.5	1.8	1.9	2.3	2.7	3.0
PQAm 60	PQA 60	0.37	0.50	H metres	0	0	2	5	10	15	20	25	30	32	38	45	50
PQAm 70	PQA 70	0.55	0.75		40	38	35	29	23.5	18	12.5	7	5				
PQAm 72	PQA 72	0.55	0.75		65	62	58	52	45.5	39.5	33	27	24	16.5	8		
PQAm 80	PQA 80	0.75	1		65	-	62	57	52	47	42	37.5	35.5	29.5	22.5	18	
PQAm 82	PQA 82	0.75	1		70	66	62	56	49.5	43	37	31	28	20.5	12		
PQAm 82	PQA 82	0.75	1		70	-	66	61	56	51	46	41.5	39.5	37.5	26.5	22	
PQAm 90	PQA 90	0.75	1		90	86	79	68	56.5	45.5	34	23	18.5	5			

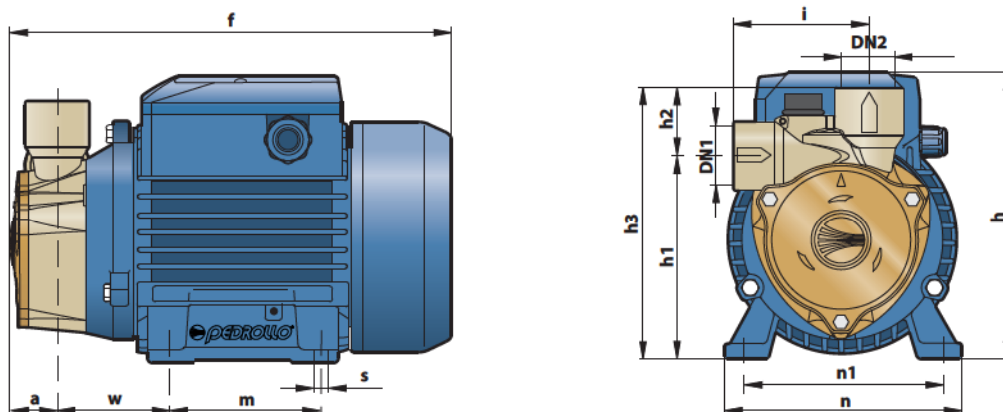
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	RYTON, complete with threaded metallic port inserts in compliance with ISO 228/1				
2	BODY PLATE	Brass				
3	MOTOR BRACKET	Aluminium with brass insert (patented), reduces the risk of impeller seizure				
4	IMPELLER	Brass, with peripheral radial vanes				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	<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>
		FN-12	Ø 12 mm	Ceramic	Graphite	NBR
7	BEARINGS	<i>Pump</i>	<i>Model</i>			
		PQA 60	6201 ZZ / 6201 ZZ			
		PQA 70-72-80-82-90	6203 ZZ / 6203 ZZ			
8	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>		
		PQAm 60	10 µF 450 VL	25 µF 250 VL		
		PQAm 70-72	16 µF 450 VL	60 µF 250 VL		
		PQAm 80-82	20 µF 450 VL	60 µF 250 VL		
		PQAm 90	20 µF 450 VL	60 µF 250 VL		
9	ELECTRIC MOTOR	PQAm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PQA: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
PQAm 60	PQA 60	½"	½"	25	226	152	103	33	136	72.5	80	120	100	55	7	4.8	4.8
PQAm 70	PQA 70			28	258	179	116.5	32.5	149		90	138	112	62		9.4	8.4
PQAm 72	PQA 72	1"	1"				121	30	151	83						9.5	8.5
PQAm 80	PQA 80	½"	½"				116.5	32.5	149	72.5						9.4	8.4
PQAm 82	PQA 82	1"	1"				121	30	151	83						9.5	8.5
PQAm 90	PQA 90	½"	½"					35	156	76						9.5	8.5

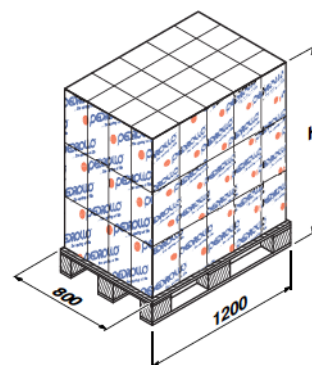
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PQAm 60	2.5 A	2.4 A	5.2 A
PQAm 70	6.2 A	5.5 A	10.8 A
PQAm 72	6.2 A	5.5 A	10.8 A
PQAm 80	6.3 A	5.5 A	10.8 A
PQAm 82	6.3 A	5.5 A	10.8 A
PQAm 90	5.6 A	5.1 A	11.5 A

MODEL	VOLTAGE (three-phase)			
Three-phase	230 V	400 V	240 V	415 V
PQA 60	2.0 A	1.15 A	1.9 A	1.1 A
PQA 70	4.2 A	2.4 A	3.7 A	2.2 A
PQA 72	4.2 A	2.4 A	3.7 A	2.2 A
PQA 80	4.2 A	2.4 A	3.7 A	2.2 A
PQA 82	4.2 A	2.4 A	3.7 A	2.2 A
PQA 90	4.2 A	2.4 A	3.8 A	2.2 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
PQAm 60	PQA 60	192	1490	940	940	264	1990	1290	1290
PQAm 70	PQA 70	120	1310	1150	1030	180	1900	1710	1530
PQAm 72	PQA 72	120	1310	1160	1040	180	1900	1730	1550
PQAm 80	PQA 80	120	1310	1150	1030	180	1900	1710	1530
PQAm 82	PQA 82	120	1310	1160	1040	180	1900	1730	1550
PQAm 90	PQA 90	120	1310	1160	1040	180	1900	1730	1550





PERFORMANCE RANGE

- Flow rate up to **160 l/min** (9.6 m³/h)
- Head up to **58 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
(up to +40 for the version with the technopolymer impeller)
- Ambient temperature up to **+40 °C**
- Max. working pressure:
 - **6 bar** for CP 100-130-132-150-158
 - **10 bar** for CP 170-190-200
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



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 domestic and civil applications such as the distribution of water in combination with small and medium sized pressure sets, for transferring liquids and for the irrigation of gardens and allotments. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

- Registered Community Design n° 406160-0001

OPTIONALS AVAILABLE ON REQUEST

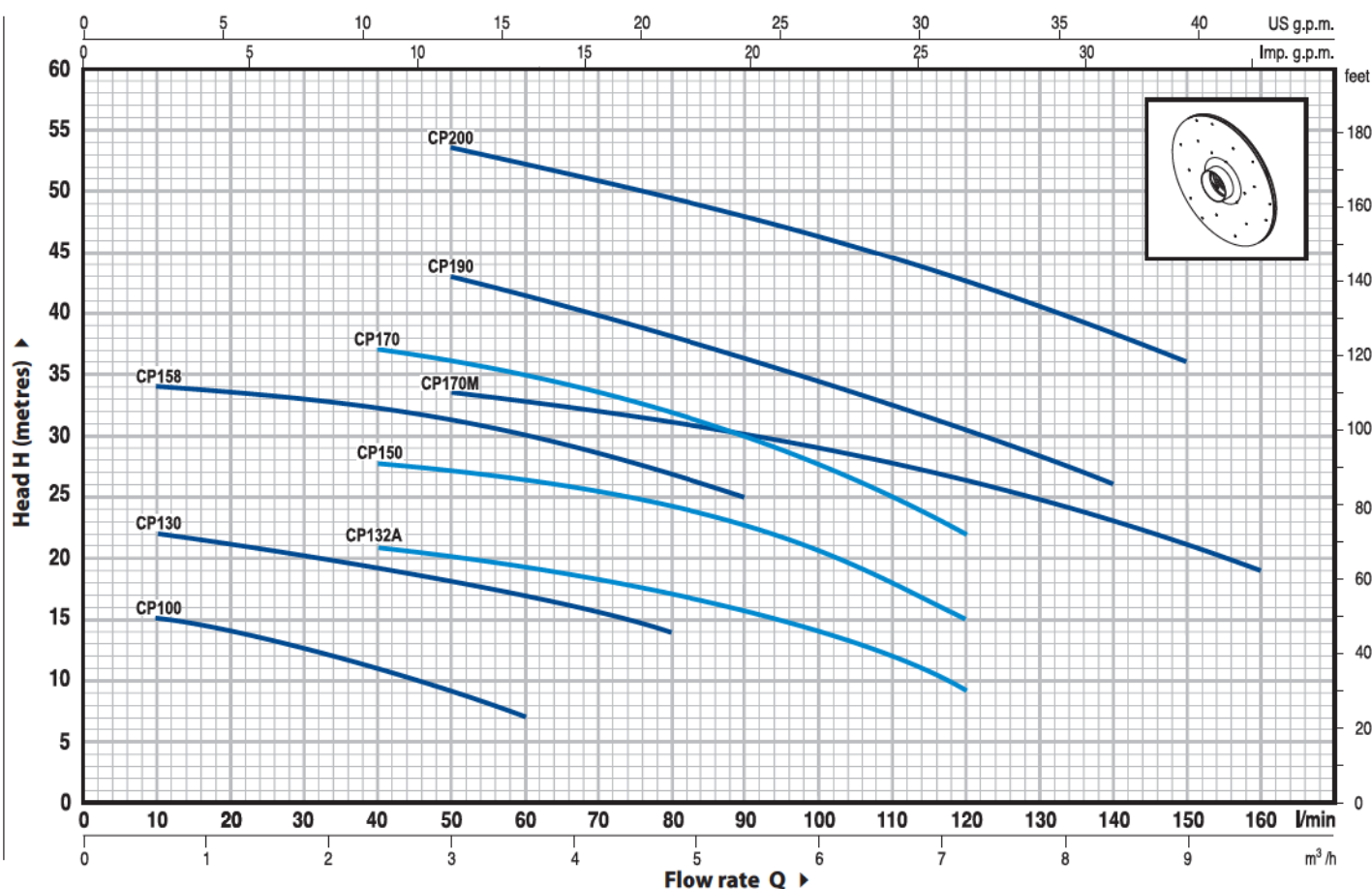
- Pump with technopolymer impeller
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection for CP 170, CP 170M

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

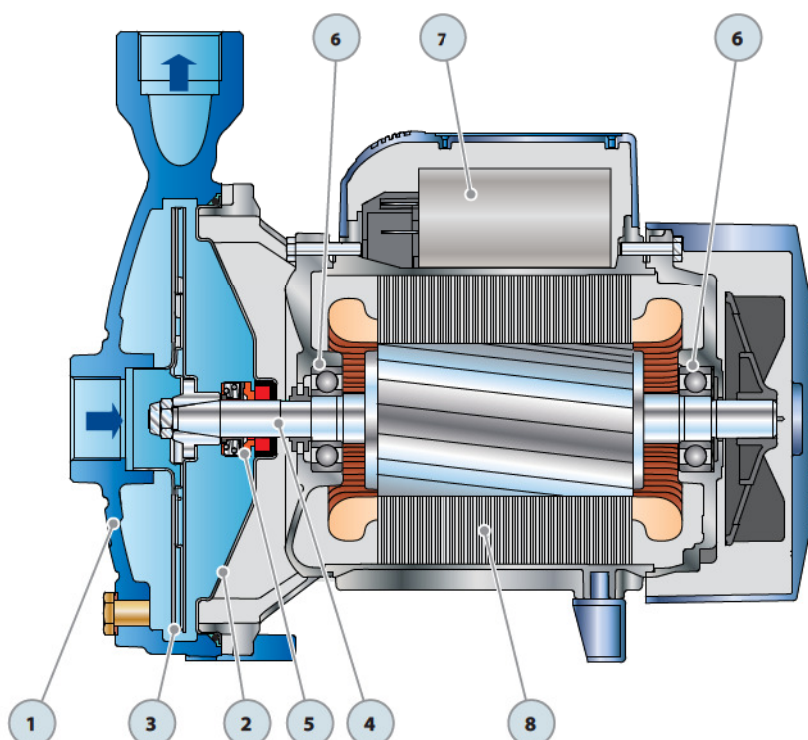


MODEL		POWER		Q	m³/h	0	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0	9.6
Single-phase	Three-phase	kW	HP			0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
CPm 100	—	0.25	0.33	H metres		16	15	14	12.5	11	9	7										
CPm 130	CP 130	0.37	0.50			23	22	21	20	19	18	17	15.5	14								
CPm 132A	CP 132A	0.60	0.85			23	—	22	21.5	21	20	19	18	17	16	14	12	9				
CPm 150	CP 150	0.75	1			29.5	—	29	28.5	28	27.5	26.5	26	24.5	23	21	18	15				
CPm 158	CP 158	0.75	1			36	34	33.5	33	32.5	31.5	30	28.5	27	25							
CPm 170	CP 170	1.1	1.5			41	—	—	38	37	36	35	33.5	32	30	27.5	25	22				
CPm 170M	CP 170M	1.1	1.5			36	—	—	35	34.5	33.5	33	32	31	30	29	28	26.5	25	23	21	19
CPm 190	CP 190	1.5	2			50	—	—	46	44.5	43	41.5	40	38	36	34.5	32.5	30.5	28	26		
—	CP 200	2.2	3			58	—	—	55	54.5	53.5	52	51	49.5	48	46	44.5	42.5	40.5	38.5	36	

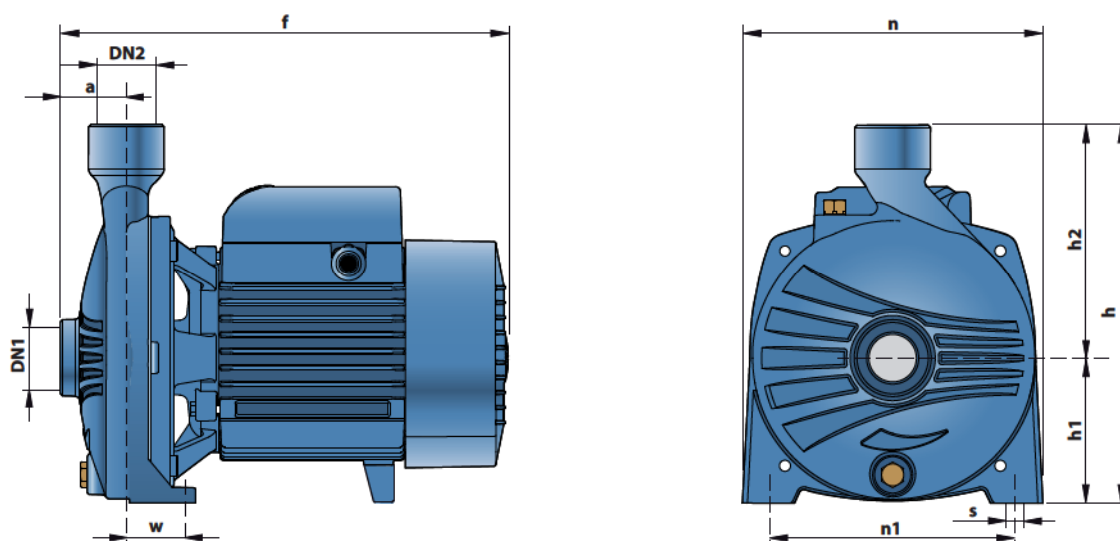
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1					
2	BODY BACKPLATE	Stainless steel AISI 304 (cast iron for CP 190-200)					
3	IMPELLER	Stainless steel AISI 304					
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 100-130-132A	AR-12	Ø 12 mm	Ceramic	Graphite	NBR
		CP 150-158	AR-14	Ø 14 mm	Ceramic	Graphite	NBR
		CP 170-170M-190-200	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
6	BEARINGS	Pump	Model				
		CP 100-130-132A	6201 ZZ / 6201 ZZ				
		CP 150-158	6203 ZZ / 6203 ZZ				
		CP 170-170M	6204 ZZ / 6204 ZZ				
		CP 190-200	6304 ZZ / 6204 ZZ				
7	CAPACITOR	Pump	Capacitance				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>			
		CPm 100	10 µF 450 VL	25 µF 250 VL			
		CPm 130	10 µF 450 VL	30 µF 250 VL			
		CPm 132A	14 µF 450 VL	30 µF 250 VL			
		CPm 150-158	20 µF 450 VL	60 µF 300 VL			
		CPm 170-170M	25 µF 450 VL	60 µF 250 VL			
		CPm 190	45 µF 450 VL	80 µF 250 VL			
8	ELECTRIC MOTOR	CPm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding.					
		CP: three-phase 230/400 V - 50 Hz.					
		⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance					
		– Insulation: F class. – Protection: IP 44.					



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 100	–	1"	1"	42	259	192	82	110	165	135	41	10	6.9	–	
CPm 130	CP 130					205	82	123					7.6	7.1	
CPm 132A	CP 132A												8.3	8.0	
CPm 150	CP 150				285	240	92	148	190	160	38	11	12.4	11.4	
CPm 158	CP 158												12.0	11.0	
CPm 170 - 170M	CP 170 - 170M	1¼"	1"	51	367	260	110	150	206	165	44.5	11	17.8	17.2	
CPm 190	CP 190				364	290	115	175					22.3	21.3	
–	CP 200												–	22.5	

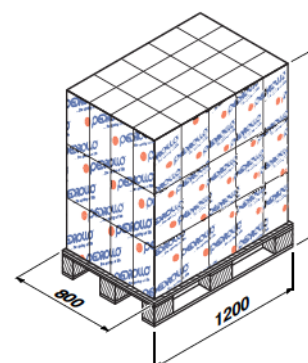
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
CPm 100	1.9 A	1.55 A	3.3 A
CPm 130	3.2 A	2.9 A	6.4 A
CPm 132A	3.5 A	3.2 A	7.0 A
CPm 150	5.7 A	5.4 A	11.4 A
CPm 158	6.0 A	5.8 A	12.0 A
CPm 170 - 170M	7.8 A	7.2 A	16.0 A
CPm 190	11.0 A	10.0 A	22.0 A

MODEL	VOLTAGE (three-phase)			
Three-phase	230 V	400 V	240 V	415 V
CP 130	2.0 A	1.2 A	1.8 A	1.1 A
CP 132A	2.9 A	1.7 A	2.4 A	1.4 A
CP 150	4.2 A	2.4 A	4.1 A	2.4 A
CP 158	4.4 A	2.5 A	4.3 A	2.5 A
CP 170 - 170M	5.2 A	3.0 A	5.1 A	2.9 A
CP 190	7.5 A	4.3 A	7.3 A	4.2 A
CP 200	9.0 A	5.2 A	8.3 A	4.8 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
CPm 100	–	105	1280	741	–	189	2190	1321	–
CPm 130	CP 130	105	1280	820	770	189	2190	1460	1360
CPm 132A	CP 132A	105	1280	890	860	189	2190	1590	1530
CPm 150	CP 150	70	1450	890	820	112	2240	1410	1300
CPm 158	CP 158	70	1450	860	790	112	2240	1360	1250
CPm 170	CP 170	50	1560	900	870	70	2120	1250	1200
CPm 170M	CP 170M	50	1560	940	910	70	2120	1310	1260
CPm 190	CP 190	36	1410	820	790	54	2040	1220	1170
–	CP 200	36	1410	–	830	54	2040	–	1240





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



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 Italian model n° 72753

OPTIONALS AVAILABLE ON REQUEST

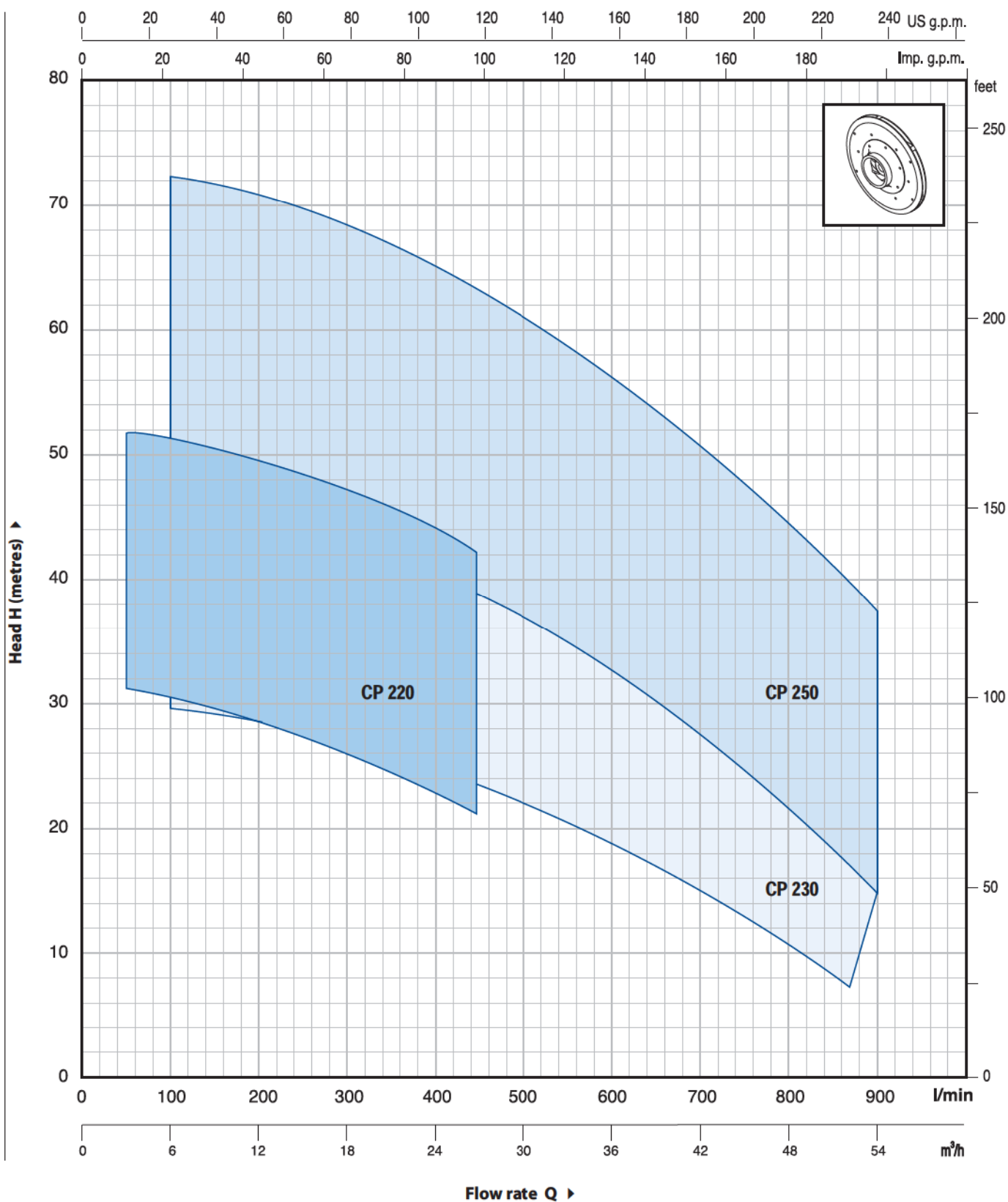
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

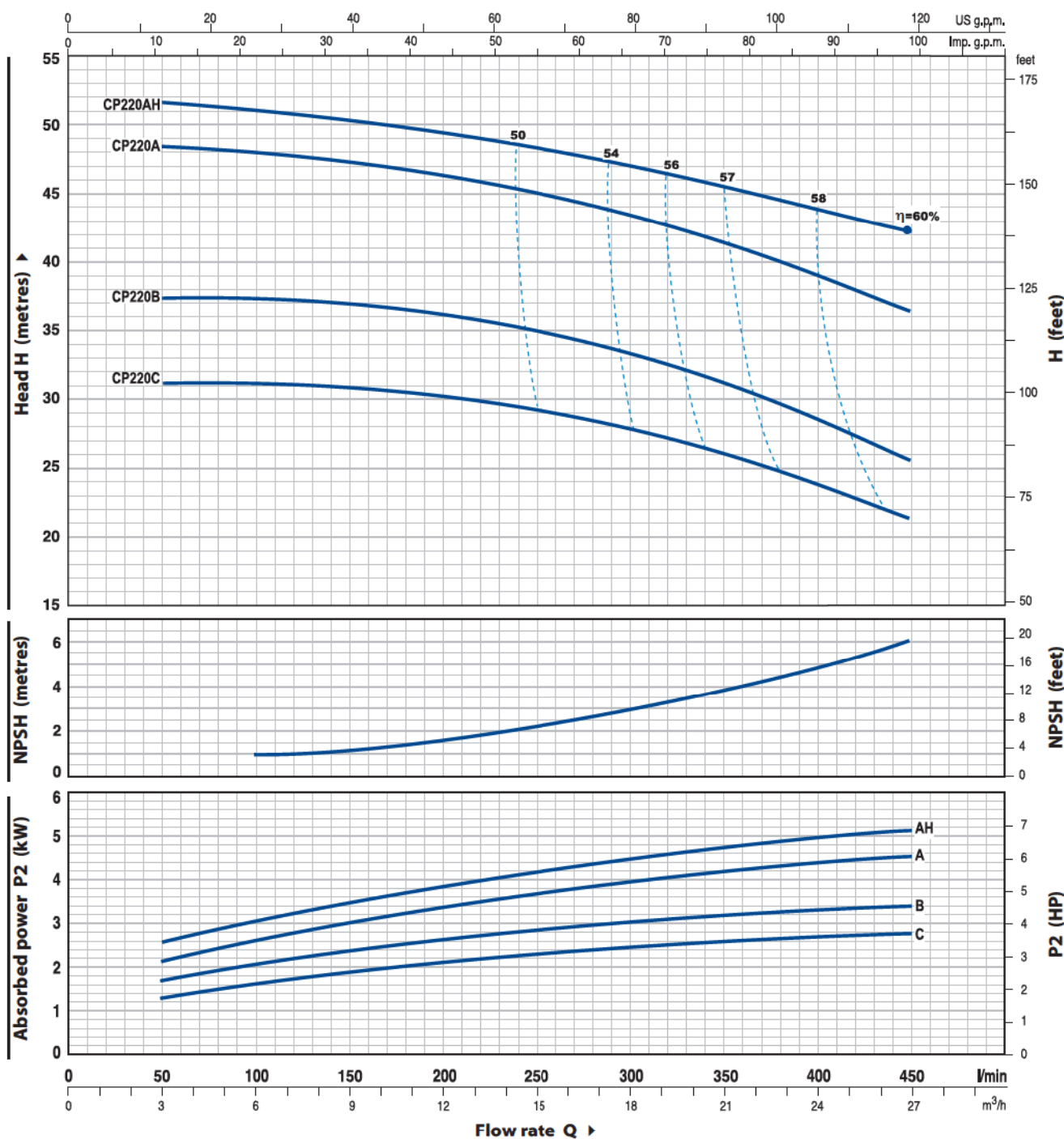
PERFORMANCE RANGE

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



CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



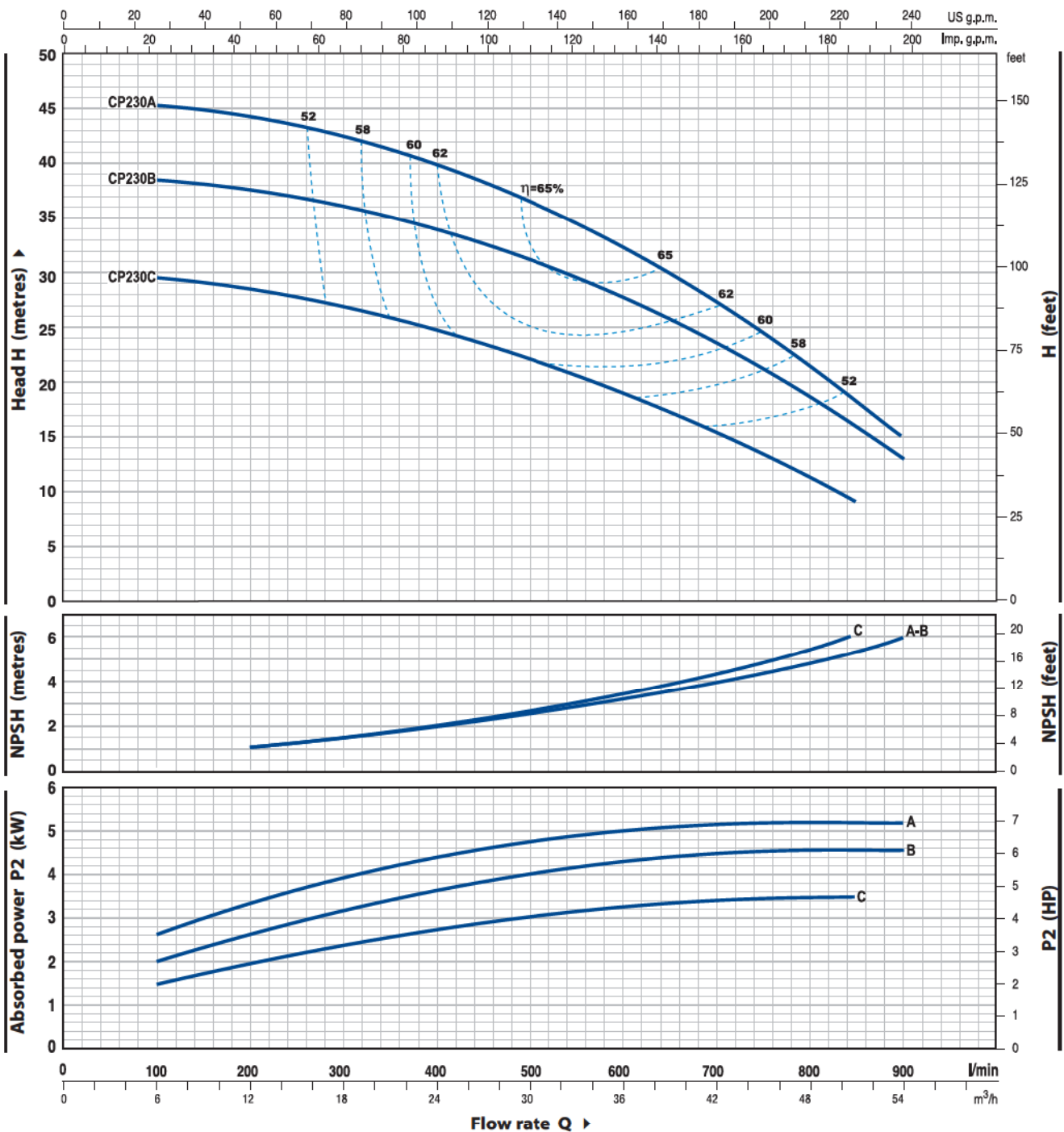
MODEL		POWER		Q	m³/h	0	3	6	12	18	24	27
Single-phase	Three-phase	kW	HP		l/min	0	50	100	200	300	400	450
CPm 220C	CP 220C	2.2	3	H metres	32	31.5	31	30	28	24	21	
–	CP 220B	3	4		38	37.5	37	36	33.5	29	25	
–	CP 220A	4	5.5		49	48.5	48	46	43.5	39.5	36	
–	CP 220AH	5.5	7.5		52	51.5	51	49	47	44	42	

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



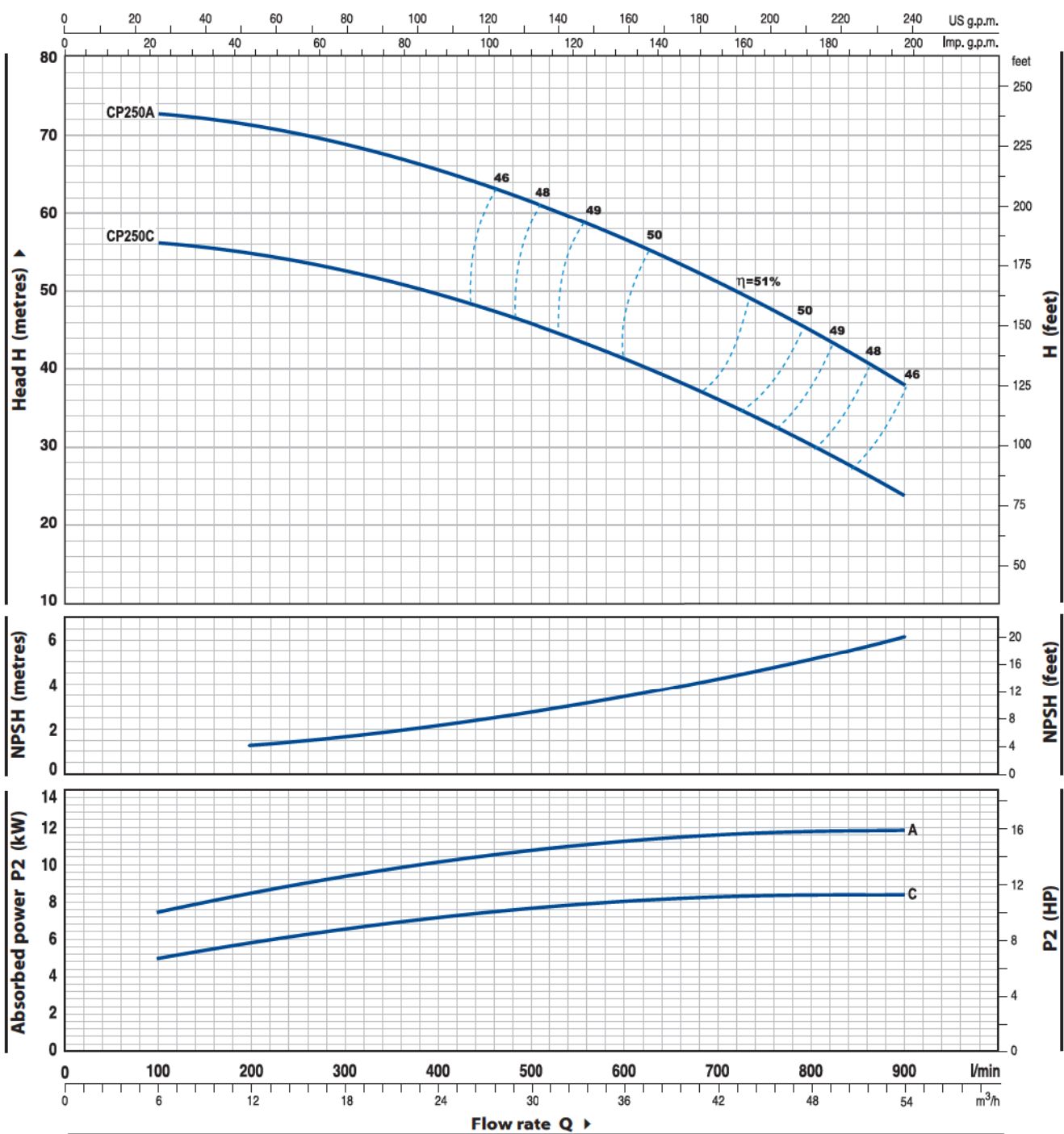
MODEL	POWER		Q	0	6	12	18	24	30	36	42	48	51	54
	kW	HP		0	100	200	300	400	500	600	700	800	850	900
Three-phase														
CP 230C	3	4	H metres	30	29.5	28.5	27	25	22	19.5	15.5	11.5	9	
CP 230B	4	5.5		39	38.5	38	36	34	31	28	24	18.5	15	13
CP 230A	5.5	7.5		46	45.5	44.5	42	40	37	32.5	27.5	21.5	18	15

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



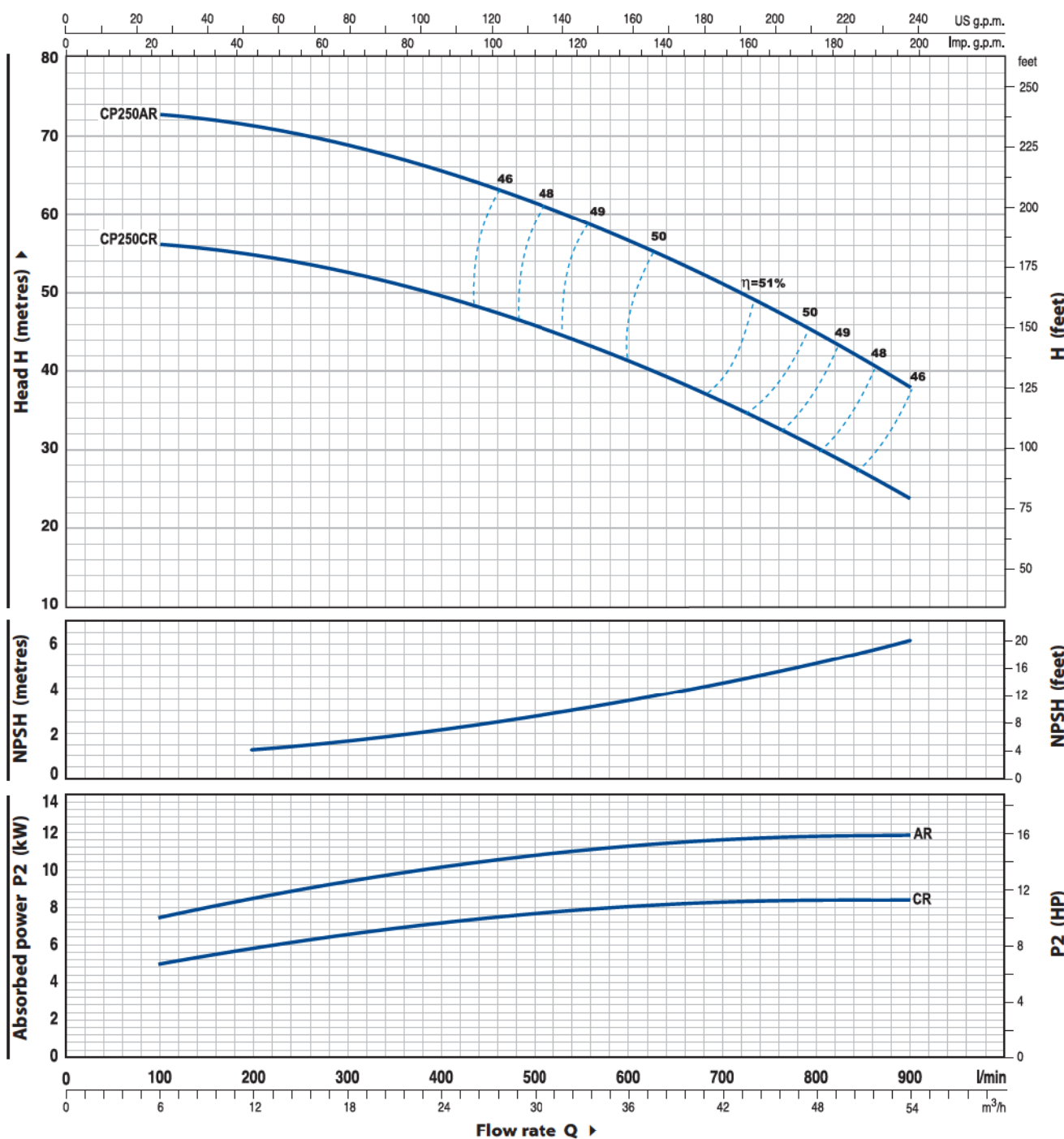
MODEL	POWER		Q	0	6	12	18	24	30	36	42	48	54
	kW	HP		0	100	200	300	400	500	600	700	800	900
CP 250C	7.5	10	H metres	57	56	54.5	52.5	49.5	46	41.5	35.5	30	24
CP 250A	11	15		74	73	71	68	65	61	57	51	45	37

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

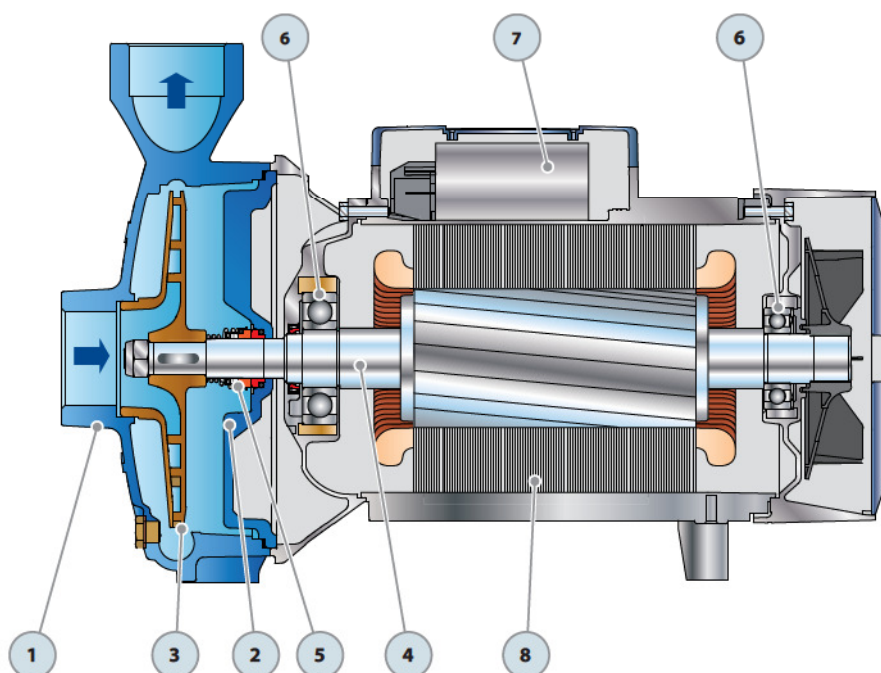


MODEL	POWER		Q	0	6	12	18	24	30	36	42	48	54
	kW	HP		0	100	200	300	400	500	600	700	800	900
Three-phase													
CP 250CR	7.5	10	H metres	57	56	54.5	52.5	49.5	46	41.5	35.5	30	24
CP 250AR	11	15		74	73	71	68	65	61	57	51	45	37

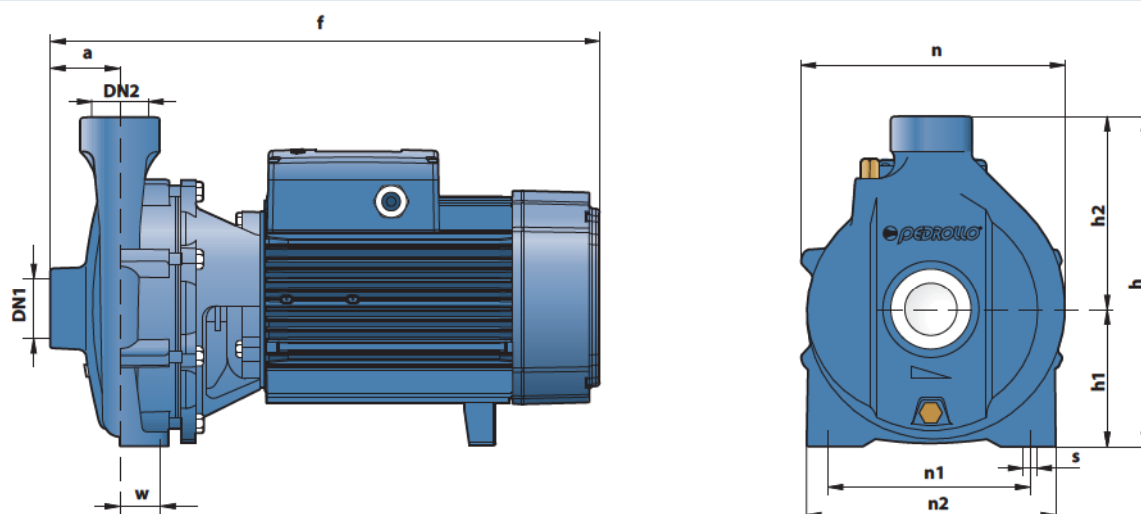
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

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</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 250C-CR	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
		CP 250A-AR	FN-32 NU	Ø 32 mm	Graphite	Ceramic	NBR
6	BEARINGS	<i>Pump</i>	<i>Model</i>				
		CP 220C	6206 ZZ - C3 / 6204 ZZ				
		CPm 220C					
		CP 220B CP 230C	6206 ZZ - C3 / 6205 ZZ				
		CP 220A-AH CP 230B-A CP 250C-CR	6307 ZZ - C3 / 6206 ZZ - C3				
		CP 250A-AR	6310 ZZ - C3 / 6308 ZZ - C3				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>				
		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 44.					



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	426/409	315	132	183	255	170	230	40	14	31.5	28.5
-	CP 220B				426									-	31.9
-	CP 220A				460	328	136	192	273	190	250			-	41.0
-	CP 220AH				505									-	46.0
-	CP 230C				426	315	132	183	255	170	230			-	31.5
-	CP 230B				460									-	41.0
-	CP 230A			505	328	136	192	273	190	250	-			46.0	
-	CP 250C			507							65	571	392	160	232
-	CP 250A			571	-	103.0									
-	CP 250CR	4"	3"	92	534	-	78.0								
-	CP 250AR				598	-	107.0								

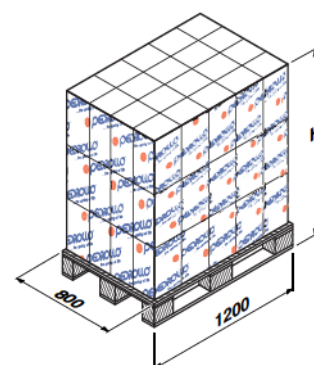
ABSORPTION

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-CR	28.6 A	16.5 A	9.5 A	27.5 A	16.0 A	9.3 A
CP 250A-AR	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	
CPm 220C	CP 220C	18	1220	590	530	24	1580	780	700
-	CP 220B	18	1180	-	600	24	1520	-	790
-	CP 220A	18	1430	-	760	24	1860	-	1000
-	CP 220AH	12	1430	-	570	16	1860	-	760
-	CP 230C	18	1200	-	590	24	1550	-	780
-	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	-	-	-	-
-	CP 250CR	6	1180	-	490	-	-	-	-
-	CP 250AR	6	1180	-	660	-	-	-	-





PERFORMANCE RANGE

- Flow rate up to **250 l/min** (15 m³/h)
- Head up to **57 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



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. The pumps in this series are specifically intended for use in the civil, industrial and agricultural sectors where their overriding characteristics of sturdiness and reliability are best appreciated. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

OPTIONALS AVAILABLE ON REQUEST

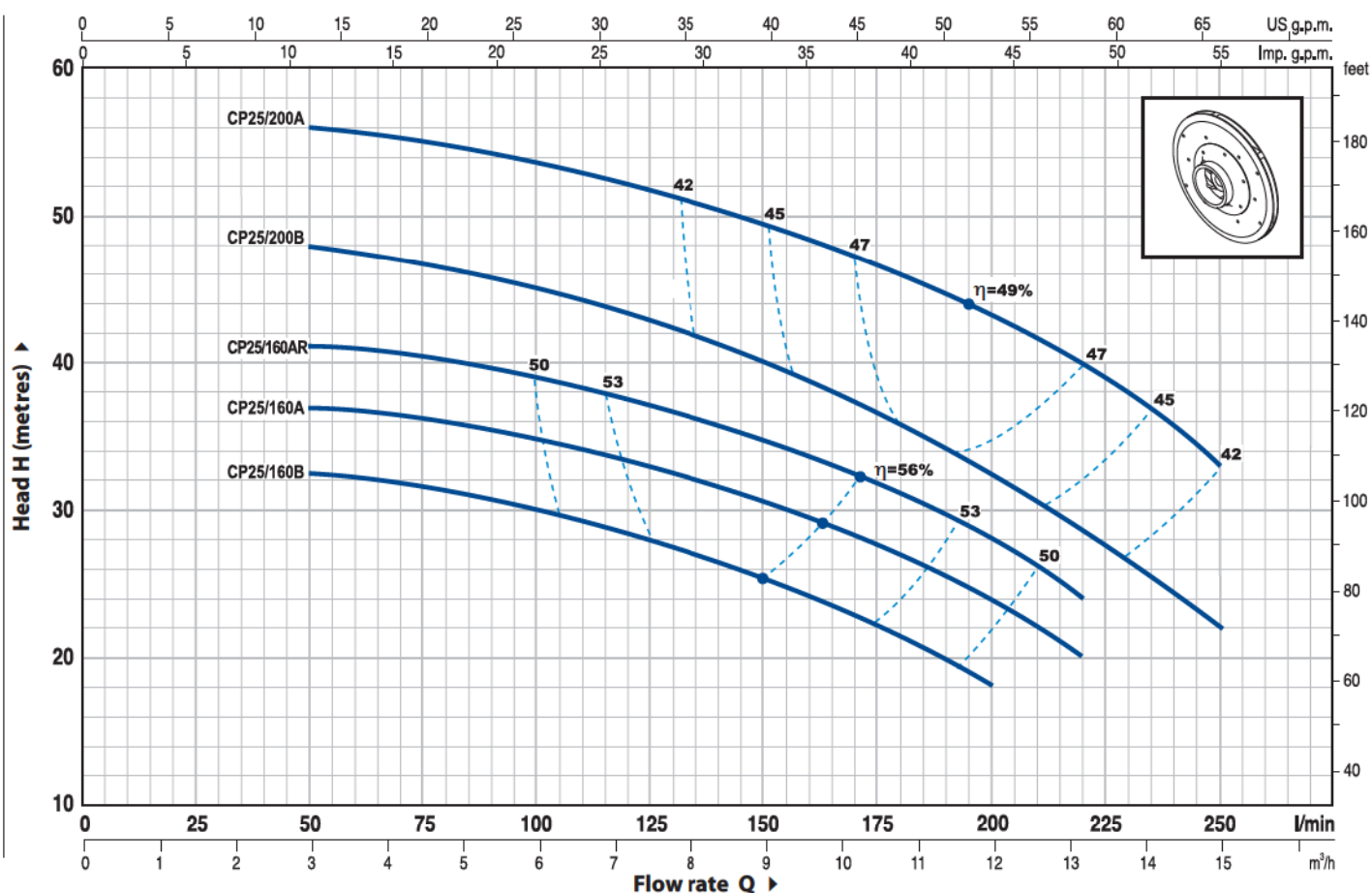
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

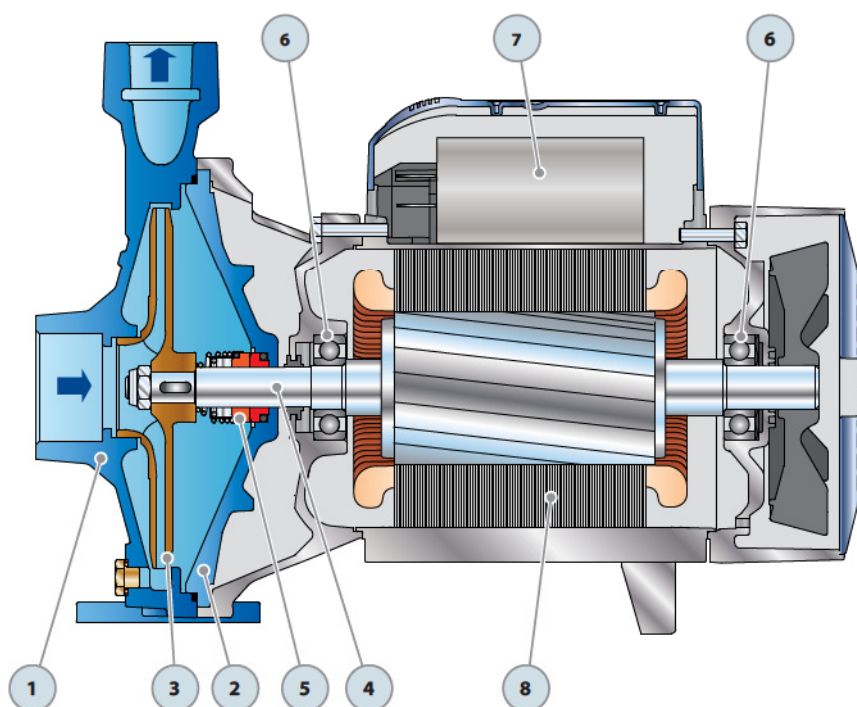


MODEL		POWER		Q	m³/h	0	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.5	8.4	9.6	10.8	12.0	13.2	15.0
Single-phase	Three-phase	kW	HP		l/min	0	50	60	70	80	90	100	110	125	140	160	180	200	220	250
CPm 25/160B	CP 25/160B	1.1	1.5	H metres		33	32.5	32	31.5	31	30.5	30	29	28	26.5	24	21.5	18		
CPm 25/160A	CP 25/160A	1.5	2			38	37	36.8	36.5	36	35.5	35	34	33	31.5	29.5	27	24	20	
–	CP 25/160AR	2.2	3			42	41	41	40.5	40	39.5	39	38	37	36	34	31	28	24	
CPm 25/200B	CP 25/200B	2.2	3			49	48	47.5	47	46.5	45.5	45	44	43	41	38.5	36	32	28	22
–	CP 25/200A	3	4			57	56	55.8	55.5	55	54.5	53.5	53	52	50.5	48.5	46	43.5	40	33

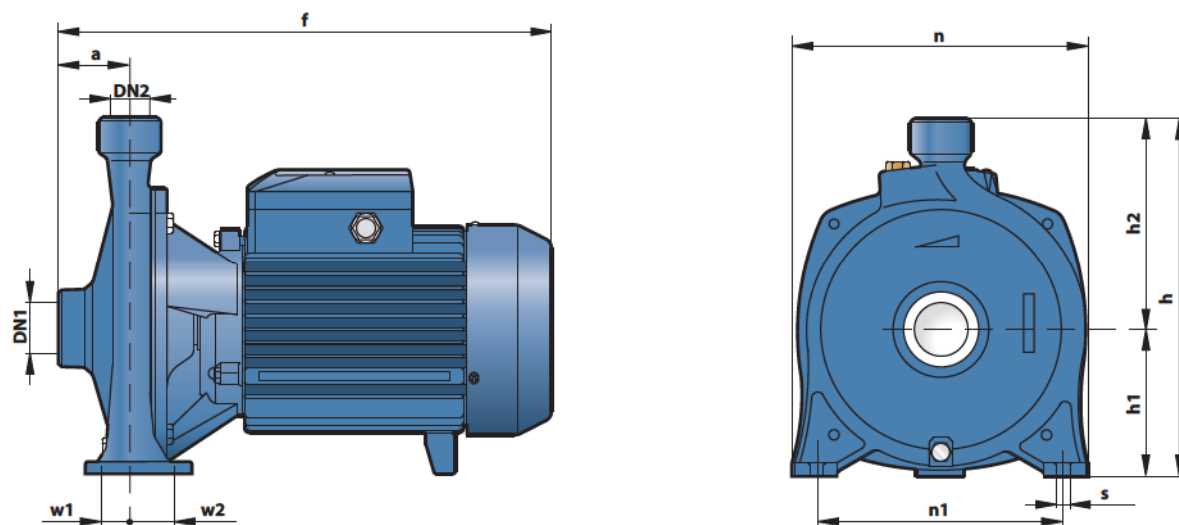
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, made to EN 733 standards, 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 25/160	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
		CP 25/200	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
6	BEARINGS	Pump	Model				
		CP 25/160	6204 ZZ / 6204 ZZ				
		CP 25/200	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 25/160B	31.5 µF 450 VL	60 µF 250 VL			
		CPm 25/160A	45 µF 450 VL	80 µF 250 VL			
		CPm 25/200B	70 µF 450 VL	–			
8	ELECTRIC MOTOR	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. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.					



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	n	n1	w1	w2	s	1~	3~
CPm 25/160B	CP 25/160B	1½"	1"	56	375	260	105	155	206	150	27.5	27.5	10	20.0	18.0
CPm 25/160A	CP 25/160A													21.3	21.3
-	CP 25/160AR													-	21.3
CPm 25/200B	CP 25/200B			60	390/365	305	125	180	252	210	23.5	39.5	11	28.5	30.7
-	CP 25/200A				390									-	30.9

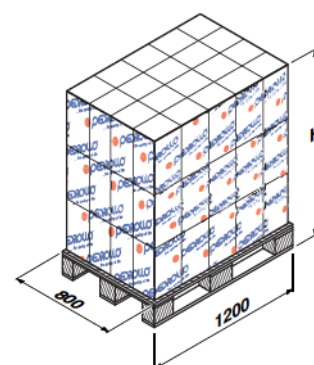
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
CPm 25/160B	8.5 A	7.8 A	17.0 A
CPm 25/160A	9.8 A	8.9 A	19.6 A
CPm 25/200B	13.4 A	13.0 A	-

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
CP 25/160B	5.7 A	3.3 A	1.9 A	5.2 A	3.0 A	1.7 A
CP 25/160A	7.3 A	4.2 A	2.4 A	6.7 A	3.9 A	2.3 A
CP 25/160AR	8.9 A	5.1 A	3.0 A	8.3 A	4.8 A	2.8 A
CP 25/200B	10.5 A	6.0 A	3.5 A	9.6 A	5.6 A	3.3 A
CP 25/200A	12.4 A	7.2 A	4.2 A	11.0 A	6.4 A	3.7 A

PALLETIZATION

MODEL		GROUPAGE			CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	n° pumps	H (mm)	kg	
CPm 25/160B	CP 25/160B	50	1560	1020	70	2130	1420	1280
CPm 25/160A	CP 25/160A	50	1560	1090	70	2130	1510	1440
-	CP 25/160AR	50	1560	-	70	2130	-	1510
CPm 25/200B	CP 25/200B	18	1190	530	-	-	-	-
-	CP 25/200A	18	1210	-	-	-	-	-





PERFORMANCE RANGE

- Maximum flow rate **160 l/min** (9.6 m³/h)
- Maximum head **23 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 **6 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



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 construction characteristics, these centrifugal pumps are suitable for use in the domestic, agricultural and industrial sectors. All of the components in contact with the pumped liquid are constructed from stainless steel AISI 304, thus guaranteeing complete hygiene and maximum resistance against corrosion. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

PATENTS - TRADE MARKS - MODELS

- Registered Community Design n° 342159-0003.
- AL-RED® is a registered trade mark.

OPTIONALS AVAILABLE ON REQUEST

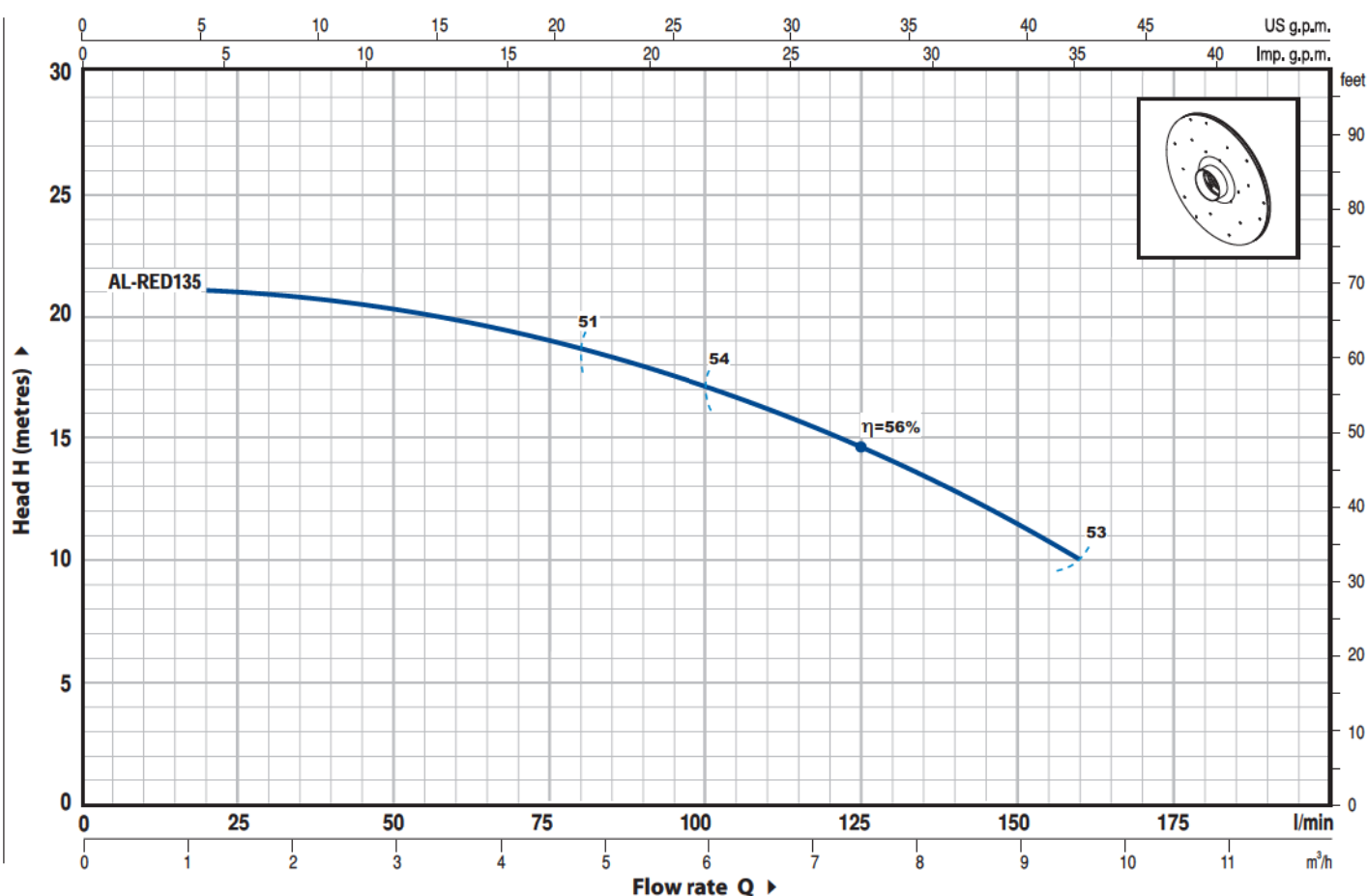
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

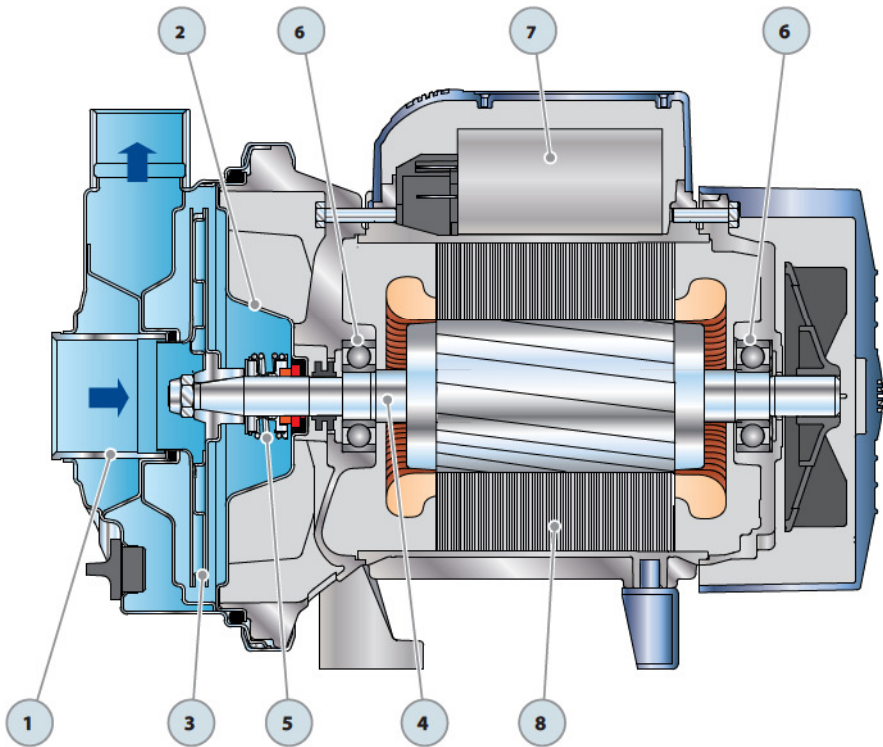


MODEL		POWER		Q	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6
Single-phase	Three-phase	kW	HP		0	20	40	60	80	100	120	140	160
AL-RED 135m	AL-RED 135	0.75	1	H metres	23	21	20.5	20	18.5	17	15	13	10

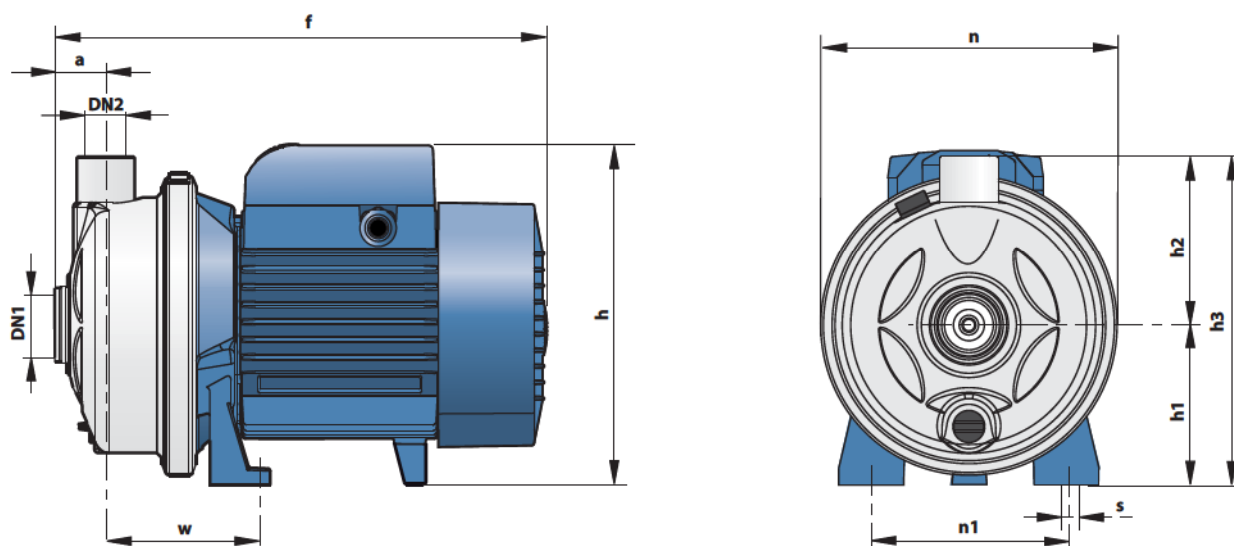
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Stainless steel AISI 304, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLER	Stainless steel AISI 304				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		MG1-14	Ø 14 mm	Ceramic	Graphite	NBR
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	Capacitance				
		(230 V or 240 V)	(110 V)			
		20 µF 450 VL	60 µF 300 VL			
8	ELECTRIC MOTOR	AL-RED 135m: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. AL-RED 135: three-phase 230/400 V - 50 Hz. ⇒ Pump fitted with the three-phase motor option offers IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	w	s	1~	3~
AL-RED 135m	AL-RED 135	1 1/4"	1"	31.5	295	206	97	103	200	182	115	93	10	9.0	8.9

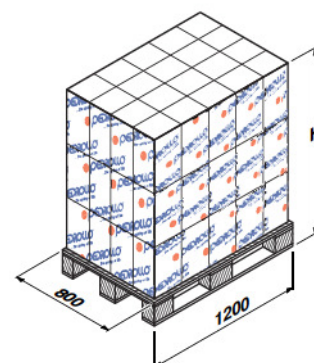
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
AL-RED 135m	5.0 A	4.8 A	10.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
AL-RED 135	3.1 A	1.8 A	1.0 A	3.0 A	1.7 A	1.0 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~ kg	3~ kg	n° pumps	H (mm)	1~ kg	3~ kg
AL-RED 135m	AL-RED 135	70	1310	650	640	112	2020	1030	1020



Centrifugal pumps

Medium flow rates



PERFORMANCE RANGE

- Flow rate up to **600 l/min** (36 m³/h)
- Head up to **39 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure:
 - **6 bar** for HF 5-50-51
 - **10 bar** for HF 5M-60-70
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use in civil and agricultural applications. The high efficiency and continuous duty capabilities makes these pumps ideal for use in activities such as flood and spray irrigation, drawing water from lakes, rivers and wells, or for any number of different industrial applications where the characteristics of high flow rates and mid to low head are required.

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

OPTIONALS AVAILABLE ON REQUEST

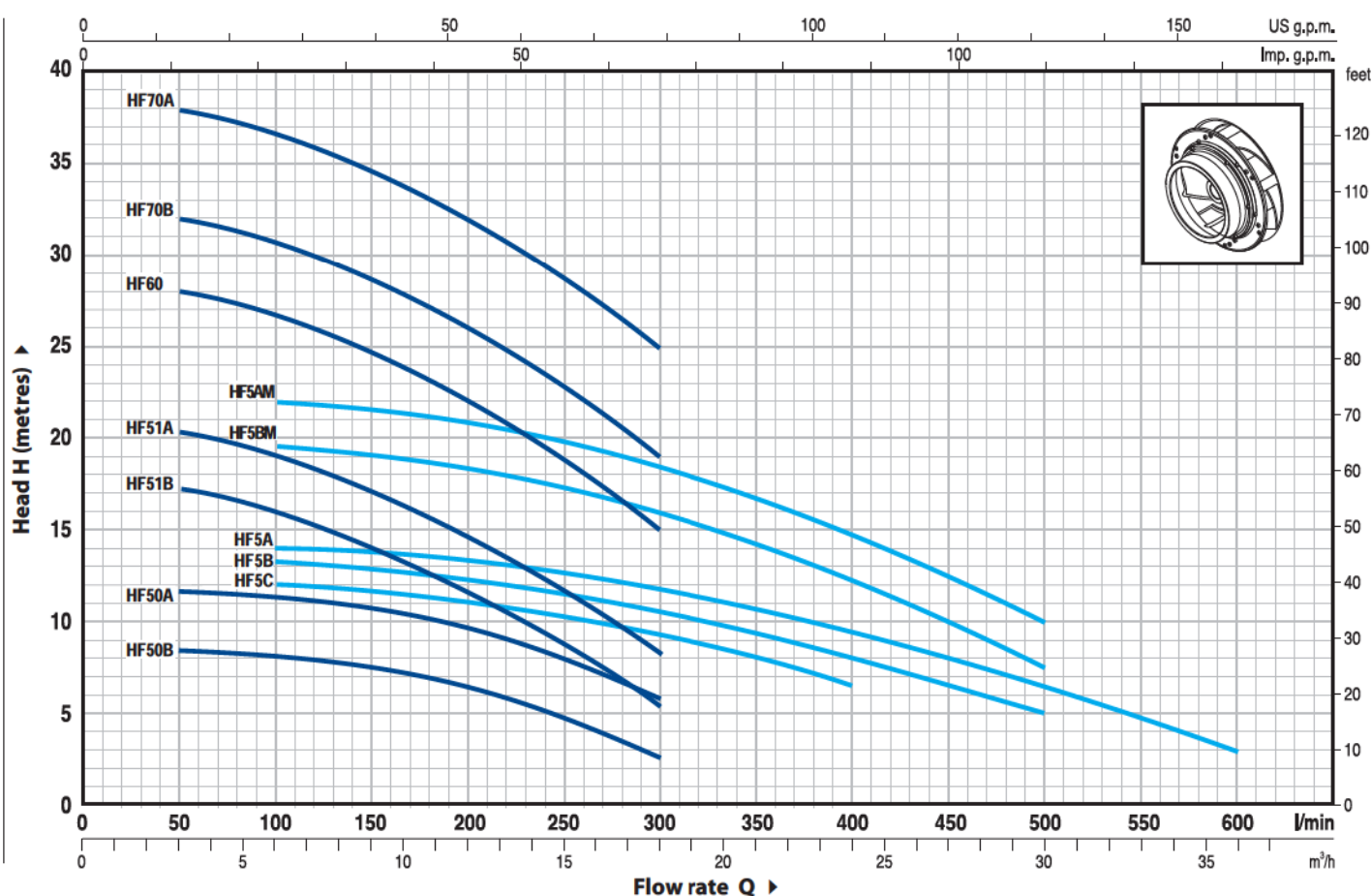
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection for HF 60, HF 70, HF 5BM, HF 5AM

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

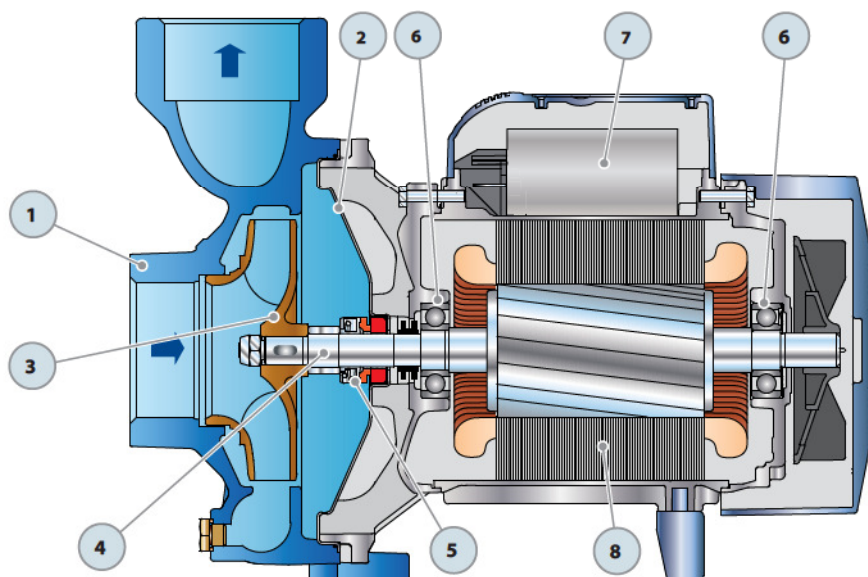


MODEL		POWER		Q	m³/h	0	3	6	9	12	15	18	21	24	30	36
Single-phase	Three-phase	kW	HP		l/min	0	50	100	150	200	250	300	350	400	500	600
HFm 50B	HF 50B	0.37	0.50	H metres	9	8.5	8.2	7.5	6.3	4.9	2.8					
HFm 50A	HF 50A	0.55	0.75		12	11.5	11.2	10.6	9.6	8	6					
HFm 51B	HF 51B	0.60	0.85		18.2	17.2	16	14	11.5	9	5.4					
HFm 51A	HF 51A	0.75	1		21.2	20.2	19	17	14.5	11.6	8.4					
HFm 60	HF 60	1.1	1.5		29	28	26.5	24.5	22	18.5	15					
HFm 70B	HF 70B	1.5	2		33	32	30.5	28.5	26	22.5	19					
–	HF 70A	2.2	3		39	38	36.5	34.5	32	28.5	25					
HFm 5C	HF 5C	0.60	0.85		12.5	–	12	11.7	11	10.2	9.2	8	6.5			
HFm 5B	HF 5B	0.75	1		13.7	–	13.2	13	12.5	11.6	10.5	9.2	8	5		
HFm 5A	HF 5A	1.1	1.5		14.5	–	13.8	13.5	13.2	12.6	11.8	10.5	9.2	6.5	3	
HFm 5BM	HF 5BM	1.1	1.5		20.2	–	19.2	19	18	17	16	14	12	7.5		
HFm 5AM	HF 5AM	1.5	2		22.5	–	22	21.5	21	20	18.5	16.6	14.5	10		

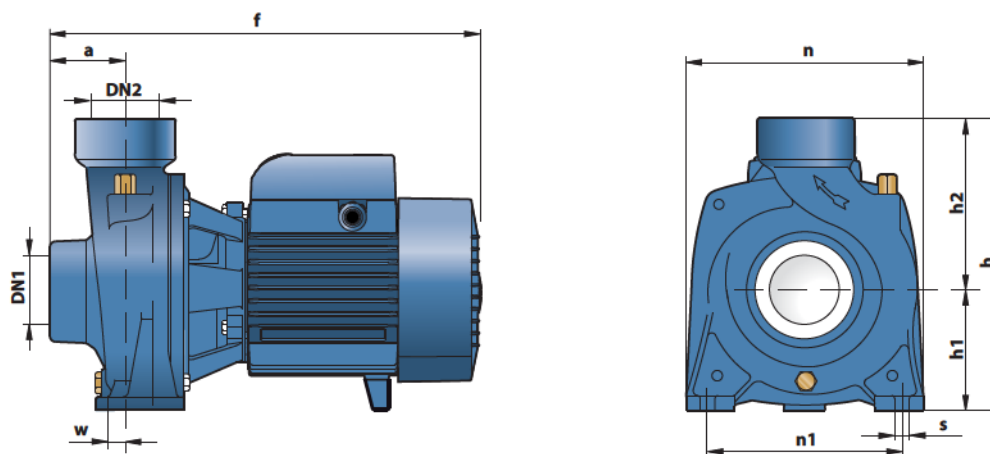
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1					
2	BODY BACKPLATE	Stainless steel AISI 304 (cast iron for HF 60-70-5M)					
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>
		HF 50	AR-12	Ø 12 mm	Ceramic	Graphite	NBR
		HF 5-51	AR-14	Ø 14 mm	Ceramic	Graphite	NBR
		HF 5M-60-70	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
6	BEARINGS	Pump	Model				
		HF 50	6201 ZZ / 6201 ZZ				
		HF 5-51	6203 ZZ / 6203 ZZ				
		HF 5M-60-70	6204 ZZ / 6204 ZZ				
7	CAPACITOR	Pump	Capacitance				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>			
		HFm 50B	10 µF 450 VL	30 µF 250 VL			
		HFm 50A	14 µF 450 VL	30 µF 250 VL			
		HFm 51B	20 µF 450 VL	60 µF 300 VL			
		HFm 51A	20 µF 450 VL	60 µF 300 VL			
		HFm 60	25 µF 450 VL	60 µF 250 VL			
		HFm 70B	45 µF 450 VL	80 µF 250 VL			
		HFm 5C	16 µF 450 VL	60 µF 300 VL			
		HFm 5B	20 µF 450 VL	60 µF 300 VL			
		HFm 5A	25 µF 450 VL	60 µF 300 VL			
		HFm 5BM	25 µF 450 VL	60 µF 250 VL			
		HFm 5AM	45 µF 450 VL	80 µF 250 VL			
		8	ELECTRIC MOTOR	HFm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding.			
HF: three-phase 230/400 V - 50 Hz.							
⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance							
		– Insulation: F class.					
		– Protection: IP 44.					



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~							
HFm 50B	HF 50B	1½"	1½"	45	276	200	82	118	165	135	1	10	8.1	7.6							
HFm 50A	HF 50A				283/276								8.7	8.3							
HFm 51B	HF 51B				300								12.9	11.9							
HFm 51A	HF 51A			48.5	373	225	92	133	190	160	4	12	13.0	12.0							
HFm 60	HF 60												19.0	18.6							
HFm 70B	HF 70B												21.8	20.5							
—	HF 70A	2"	2"	60	332	238	97	141	196	160	14	11	—	21.9							
HFm 5C	HF 5C												14.5	13.3							
HFm 5B	HF 5B												14.5	13.3							
HFm 5A	HF 5A												15.3	14.9							
HFm 5BM	HF 5BM												51	386	260	110	150	206	1	19.5	18.9
HFm 5AM	HF 5AM																			22.0	20.9

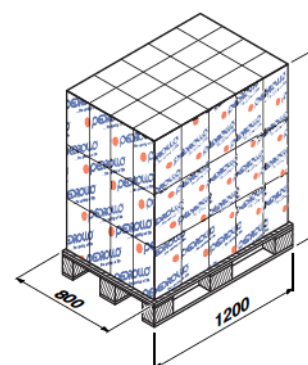
ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
Single-phase			
HFm 50B	2.8 A	2.6 A	5.6 A
HFm 50A	3.8 A	3.5 A	7.6 A
HFm 51B	4.7 A	4.6 A	9.2 A
HFm 51A	5.6 A	5.3 A	11.2 A
HFm 60	8.0 A	7.6 A	16.0 A
HFm 70B	10.0 A	9.0 A	20.0 A
HFm 5C	4.2 A	3.8 A	8.4 A
HFm 5B	4.9 A	4.5 A	10.0 A
HFm 5A	6.2 A	5.7 A	12.5 A
HFm 5BM	7.7 A	7.1 A	14.8 A
HFm 5AM	9.8 A	9.0 A	19.6 A

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
HF 50B	2.1 A	1.2 A	0.7 A	2.1 A	1.2 A	0.7 A
HF 50A	3.0 A	1.7 A	1.0 A	3.0 A	1.75 A	1.0 A
HF 51B	3.6 A	2.1 A	1.2 A	3.8 A	2.2 A	1.3 A
HF 51A	4.4 A	2.5 A	1.5 A	4.0 A	2.3 A	1.3 A
HF 60	5.7 A	3.3 A	1.9 A	5.5 A	3.2 A	1.8 A
HF 70B	7.4 A	4.3 A	2.5 A	7.1 A	4.1 A	2.4 A
HF 70A	9.5 A	5.5 A	3.2 A	9.1 A	5.3 A	3.1 A
HF 5C	3.5 A	2.0 A	1.15 A	3.3 A	1.9 A	1.1 A
HF 5B	3.6 A	2.1 A	1.2 A	3.5 A	2.0 A	1.2 A
HF 5A	4.0 A	2.3 A	1.35 A	3.6 A	2.1 A	1.2 A
HF 5BM	5.7 A	3.3 A	1.9 A	5.5 A	3.2 A	1.8 A
HF 5AM	7.1 A	4.1 A	2.4 A	6.5 A	3.7 A	2.1 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
HFm 50B	HF 50B	75	1290	630	590	135	2210	1110	1050
HFm 50A	HF 50A	75	1290	670	640	135	2210	1190	1140
HFm 51B	HF 51B	70	1430	920	850	112	2200	1460	1350
HFm 51A	HF 51A	70	1430	930	860	112	2200	1480	1360
HFm 60	HF 60	36	1470	700	690	54	2130	1050	1020
HFm 70B	HF 70B	36	1470	800	760	54	2130	1200	1130
–	HF 70A	36	1470	–	810	54	2130	–	1200
HFm 5C	HF 5C	60	1540	890	820	84	2100	1240	1140
HFm 5B	HF 5B	60	1540	890	820	84	2100	1240	1140
HFm 5A	HF 5A	60	1540	940	910	84	2100	1300	1270
HFm 5BM	HF 5BM	50	1540	990	960	70	2100	1380	1340
HFm 5AM	HF 5AM	50	1540	1120	1060	70	2100	1560	1480



Centrifugal pumps

High flow rates



PERFORMANCE RANGE

- Flow rate up to **2200 l/min** (132 m³/h)
- Head up to **24.5 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure:
 - **6 bar** for HF 4
 - **10 bar** for HF 6-8-20-30
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use in civil and agricultural applications. The high efficiency and continuous duty capabilities makes these pumps ideal for use in activities such as flood and spray irrigation, drawing water from lakes, rivers and wells, or for any number of different industrial applications where the characteristics of high flow rates and mid to low head are required.

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

OPTIONALS AVAILABLE ON REQUEST

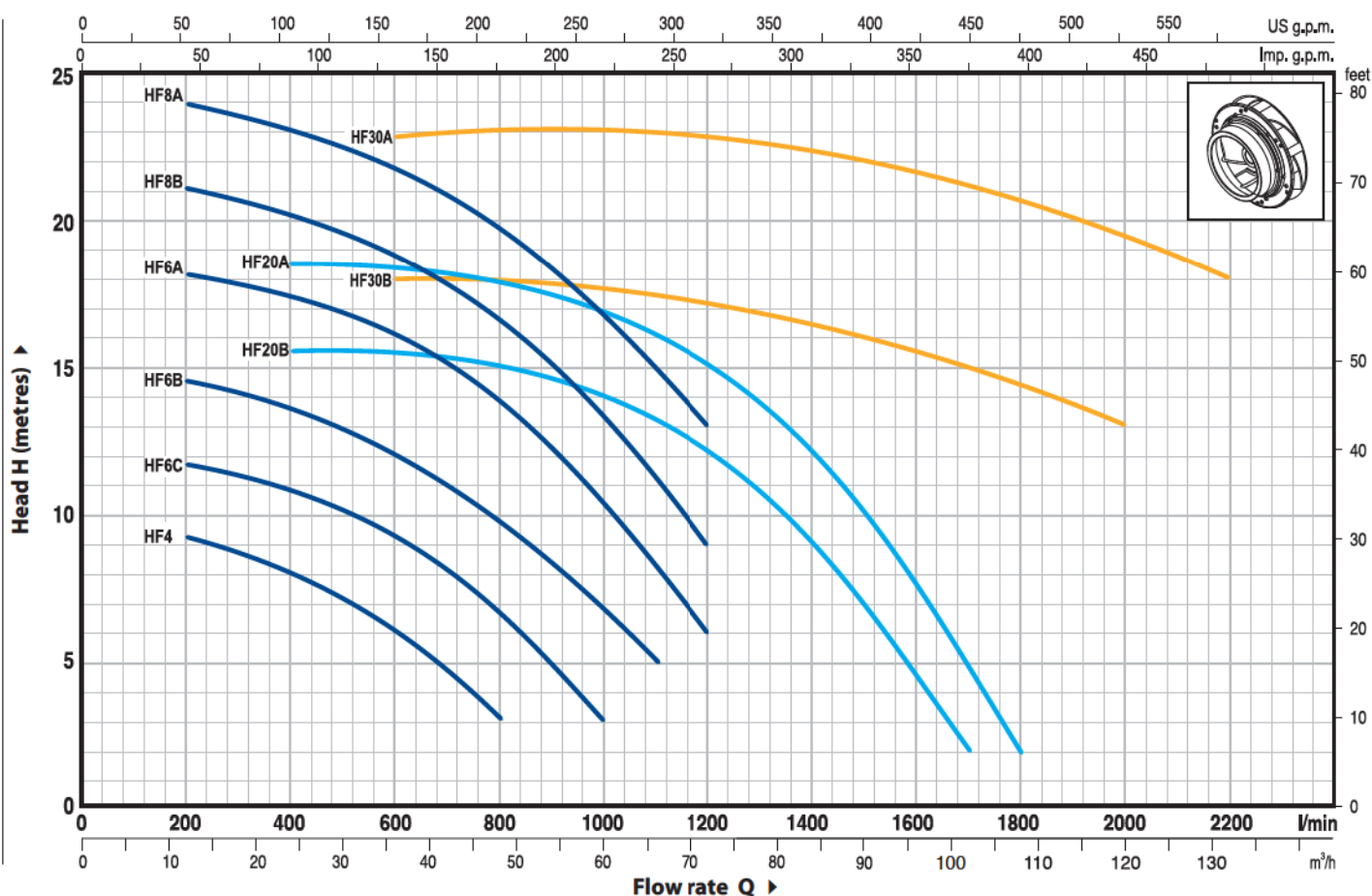
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

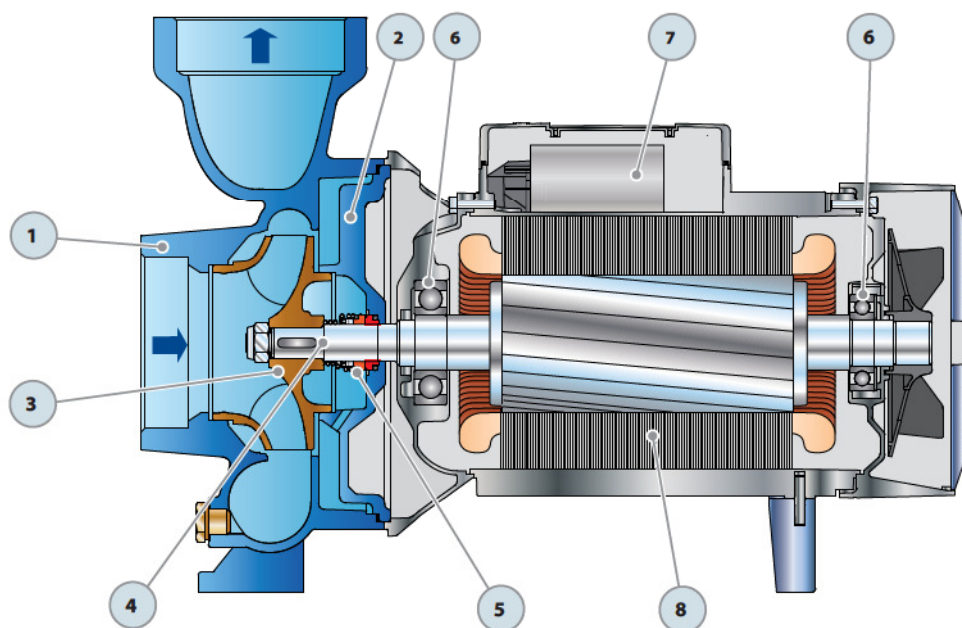


MODEL		POWER		Q	m³/h	0	12	18	24	30	36	42	48	54	60	66	72	84	96	102	108	120	132
Single-phase	Three-phase	kW	HP		l/min	0	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1700	1800	2000	2200
HFm 4	HF 4	0.75	1	H metres	10	9.3	8.7	8	7	6	4.7	3											
HFm 6C	HF 6C	1.1	1.5		11.9	11.7	11.3	10.7	10.2	9.2	8	6.7	5	3									
HFm 6B	HF 6B	1.5	2		14.7	14.5	14	13.5	12.8	12	11	9.7	8.2	6.7	5								
–	HF 6A	2.2	3		18.5	18.1	17.8	17.2	16.8	16	15	13.8	12.2	10.5	8.3	6							
–	HF 8B	3	4		21.5	21	20.7	20	19.5	18.8	17.8	16.5	15	13.5	11.2	9							
–	HF 8A	4	5.5		24.5	24	23.5	23	22.5	21.8	20.8	19.5	18.3	16.8	15	13							
–	HF 20B	3	4		16	-	-	15.5	15.4	15.3	15.2	15	14.5	14	13	12	9	4.8	2				
–	HF 20A	4	5.5		19	-	-	18.5	18.4	18.3	18.2	18	17.5	17	16.2	15.2	12	7.8	5	2			
–	HF 30B	5.5	7.5		18	-	-	-	-	18	18	18	18	18	17.5	17	16.5	15.5	15	14.5	13		
–	HF 30A	7.5	10		23	-	-	-	-	23	23	23	23	23	22.5	22.5	22.5	22	21.5	21	19.5	18	

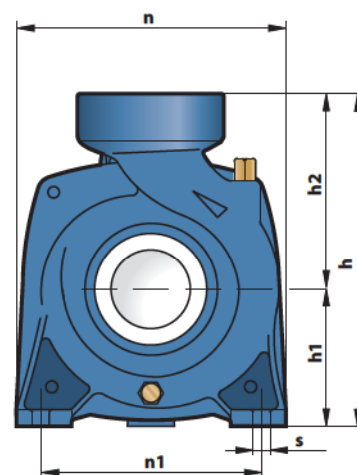
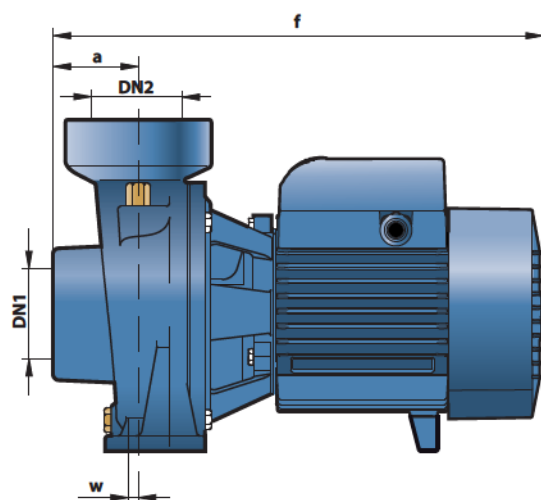
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1					
2	BODY BACKPLATE	Cast iron (stainless steel AISI 304 for HF 4)					
3	IMPELLER	Brass for HF 4, HF 6, HF 8, HF 20 Cast iron for HF 30					
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104					
5	MECHANICAL SEAL	<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>
		HF 4	AR-14	Ø 14 mm	Ceramic	Graphite	NBR
		HF 6	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
		HF 8-20	FN-20	Ø 20 mm	Graphite	Ceramic	NBR
		HF 30	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
6	BEARINGS	<i>Pump</i>	<i>Model</i>				
		HF 4	6203 ZZ / 6203 ZZ				
		HF 6	6304 ZZ / 6204 ZZ				
		HF 8B-20B	6206 ZZ - C3 / 6205 ZZ				
		HF 8A-20A	6306 ZZ - C3 / 6206 ZZ - C3				
		HF 30	6307 ZZ - C3 / 6206 ZZ - C3				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>		
		HFm 4	20 µF 450 VL		60 µF 300 VL		
		HFm 6C	31.5 µF 450 VL		60 µF 250 VL		
		HFm 6B	45 µF 450 VL		80 µF 250 VL		
8	ELECTRIC MOTOR	HFm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. HF: three-phase 230/400 V - 50 Hz up to 4 kW, 400/690 V - 50 Hz from 5.5 to 7.5 kW ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.					



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~
HFm 4	HF 4	2½"	2½"	55	323	240	97	143	198	155	0	10	14.5	13.2
HFm 6C	HF 6C	3"	3"	68	411	312	120	192	240	190	6	12	25.5	24.2
HFm 6B	HF 6B												26.5	25.5
—	HF 6A	4"	4"	80	435	132	180	245	190	30	14	—	26.7	
—	HF 8B											—	35.0	
—	HF 8A											—	40.0	
—	HF 20B											—	35.0	
—	HF 20A				—							40.0		
—	HF 30B	4"	4"	82	585	370	160	210	292	212	30	14	—	60.9
—	HF 30A												—	65.2

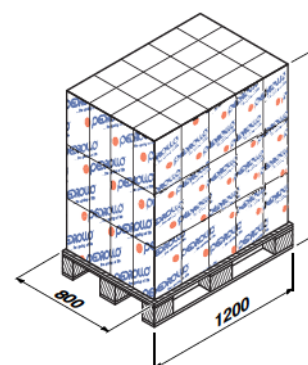
ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
HFm 4	5.9 A	5.3 A	11.8 A
HFm 6C	8.8 A	8.0 A	17.6 A
HFm 6B	10.8 A	9.8 A	21.6 A

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
HF 4	4.3 A	2.5 A	1.4 A	4.0 A	2.3 A	1.3 A
HF 6C	6.2 A	3.6 A	2.1 A	6.0 A	3.5 A	2.0 A
HF 6B	8.0 A	4.6 A	2.7 A	7.4 A	4.3 A	2.5 A
HF 6A	9.0 A	5.2 A	3.0 A	8.3 A	4.8 A	2.8 A
HF 8B	11.8 A	6.8 A	3.9 A	12.1 A	7.0 A	4.0 A
HF 8A	15.8 A	9.1 A	5.3 A	15.2 A	8.8 A	5.1 A
HF 20B	13.0 A	7.5 A	4.3 A	13.4 A	7.7 A	4.4 A
HF 20A	15.2 A	8.8 A	5.1 A	15.3 A	8.8 A	5.1 A
HF 30B	21.3 A	12.3 A	7.1 A	20.4 A	11.8 A	6.8 A
HF 30A	28.6 A	16.5 A	9.5 A	27.5 A	15.9 A	9.2 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
		n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
Single-phase	Three-phase			1~	3~			1~	3~
HFm 4	HF 4	60	1540	890	830	84	2100	1240	1150
HFm 6C	HF 6C	36	1480	940	890	54	2150	1400	1330
HFm 6B	HF 6B	36	1480	970	940	54	2150	1450	1400
-	HF 6A	36	1480	-	980	54	2150	-	1460
-	HF 8B	18	1430	-	650	24	1860	-	860
-	HF 8A	18	1430	-	740	24	1860	-	980
-	HF 20B	18	1430	-	650	24	1860	-	860
-	HF 20A	18	1430	-	740	24	1860	-	980
-	HF 30B	12	1570	-	750	16	2040	-	990
-	HF 30A	12	1570	-	800	16	2040	-	1060





PERFORMANCE RANGE

- Flow rate up to **1200 l/min** (72 m³/h)
- Head up to **22.5 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure: **10 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

The performance and mechanical dimensions of the NF series pumps have been specifically designed for use in the civil and agricultural sectors. As a result of their high efficiency and continuous duty capabilities, they are recommended for use in applications such as flood and spray irrigation, drawing water from lakes, rivers and wells, and for generally transferring liquids. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

OPTIONALS AVAILABLE ON REQUEST

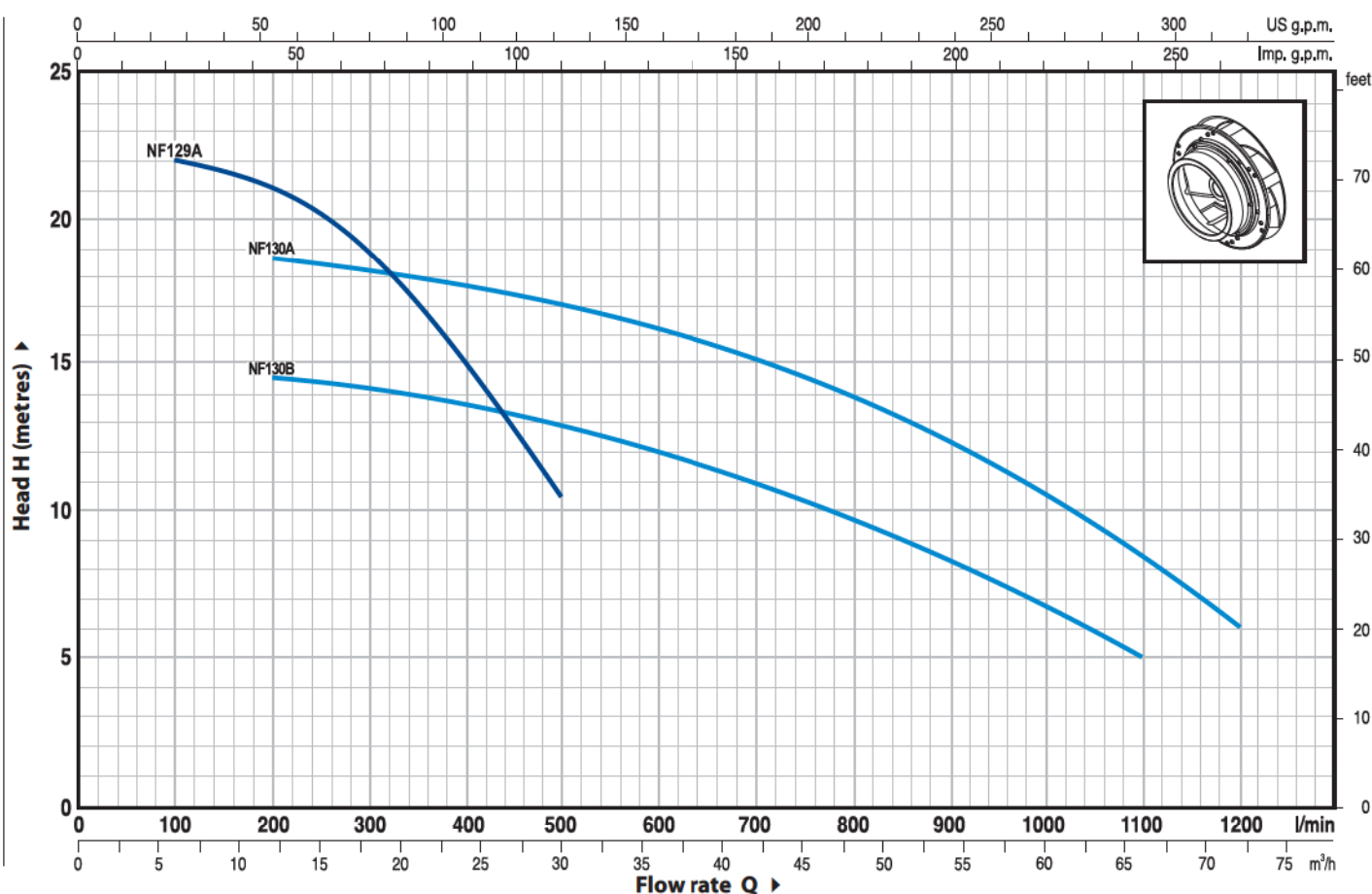
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

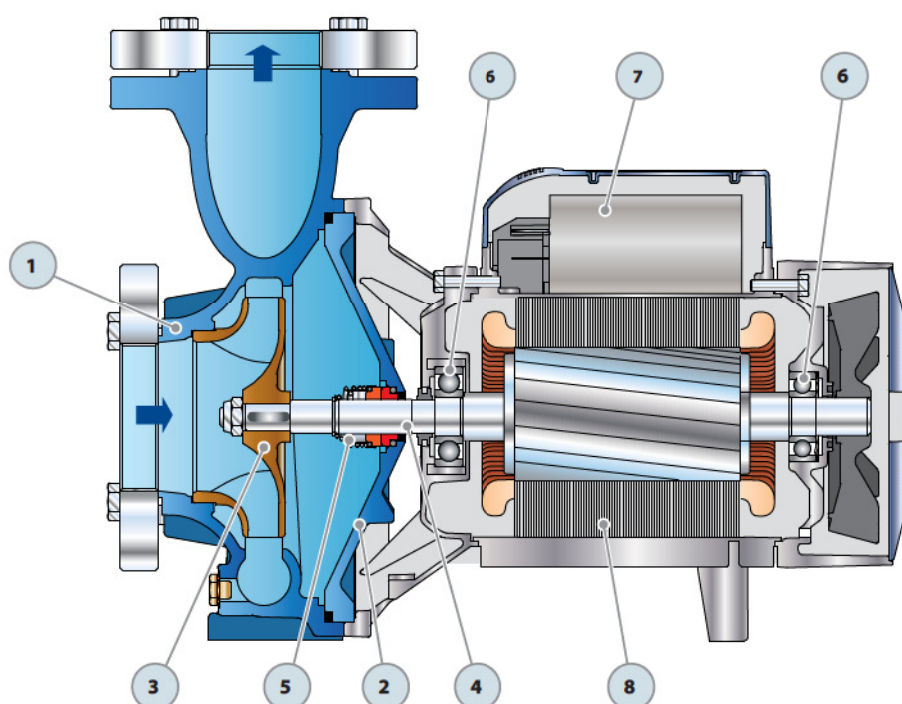


MODEL		POWER		Q																	
Single-phase	Three-phase	kW	HP		m³/h	0	6	9	12	15	18	21	24	30	36	42	48	54	60	66	72
NFm 129A	NF 129A	1.5	2	H metres	l/min	0	100	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200
NFm 130B	NF 130B	1.5	2			22.5	22	21.5	21	20	18.5	16.6	14.5	10							
-	NF 130A	2.2	3			14.7	-	-	14.5	14.2	14	13.7	13.5	13.2	12	11	9.7	8.2	6.7	5	
						18.5	-	-	18.1	18	17.8	17.5	17.2	16.8	16	15	13.8	12.2	10.5	8.3	6

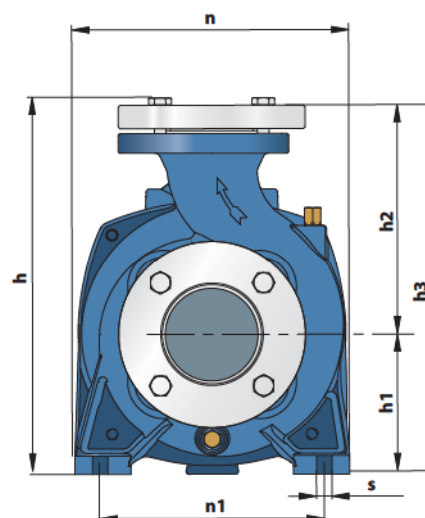
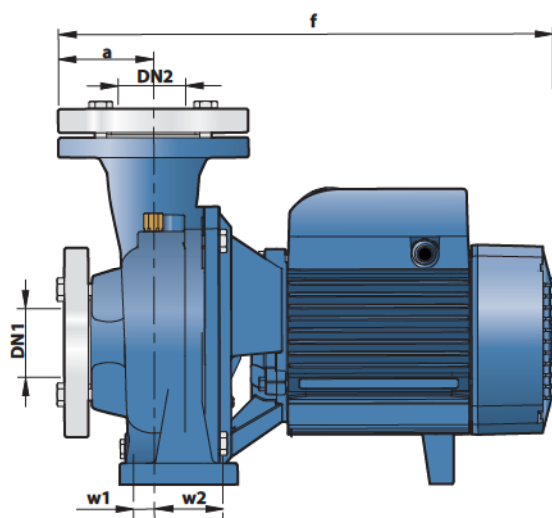
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with flanged suction and delivery 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	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		FN-18	Ø 18 mm	Graphite	Ceramic	NBR
6	BEARINGS	Pump	Model			
		NF 129	6204 ZZ / 6204 ZZ			
		NF 130	6304 ZZ / 6204 ZZ			
7	CAPACITOR	Capacitance				
		(230 V or 240 V)	(110 V)			
		45 µF 450 VL	80 µF 250 VL			
8	ELECTRIC MOTOR	NFm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. NF: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm											kg*	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	w1	w2	s	1~	3~
NFm 129A	NF 129A	2"	2"	56	398	276	110	159	269	206	160	1	62	11	25.0	23.7
NFm 130B	NF 130B	3"	3"	71	420	320	120	193	313	240	190	6	66	12	31.6	30.7
-	NF 130A														-	32.6

(*weight includes counterflanges)

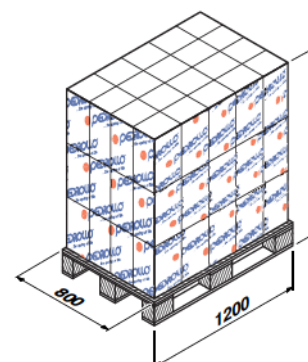
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
NFm 129A	9.8 A	9.0 A	19.6 A
NFm 130B	10.8 A	9.8 A	21.6 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
NF 129A	7.1 A	4.1 A	2.4 A	6.5 A	3.7 A	2.1 A
NF 130B	8.0 A	4.6 A	2.7 A	7.4 A	4.3 A	2.5 A
NF 130A	9.0 A	5.2 A	3.0 A	8.3 A	4.8 A	2.8 A

PALLETIZATION

MODEL		GROUPAGE			CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	n° pumps	H (mm)	kg	
NFm 129A	NF 129A	36	1430	910	54	2080	1360	1300
NFm 130B	NF 130B	36	1430	1160	54	2080	1730	1680
-	NF 130A	36	1430	-	54	2080	-	1750





PERFORMANCE RANGE

- Flow rate up to **350 l/min** (21 m³/h)
- Head up to **20 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
(up to +40 for the version with the technopolymer impeller)
- Ambient temperature between **-10 °C** and **+40 °C**
- Max. working pressure **6 bar**
- Passage of suspended solids up to **Ø 10 mm**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use with liquids that are not chemically aggressive towards the materials from which the pump is made.

The open impeller design allows **liquids containing relatively high levels of impurities** to be pumped without the risk of the impeller clogging. As a result of these characteristics the NGA series pumps are used specifically in industry and for transferring water from canals, rivers, reservoirs, tanks, etc.

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

OPTIONALS AVAILABLE ON REQUEST

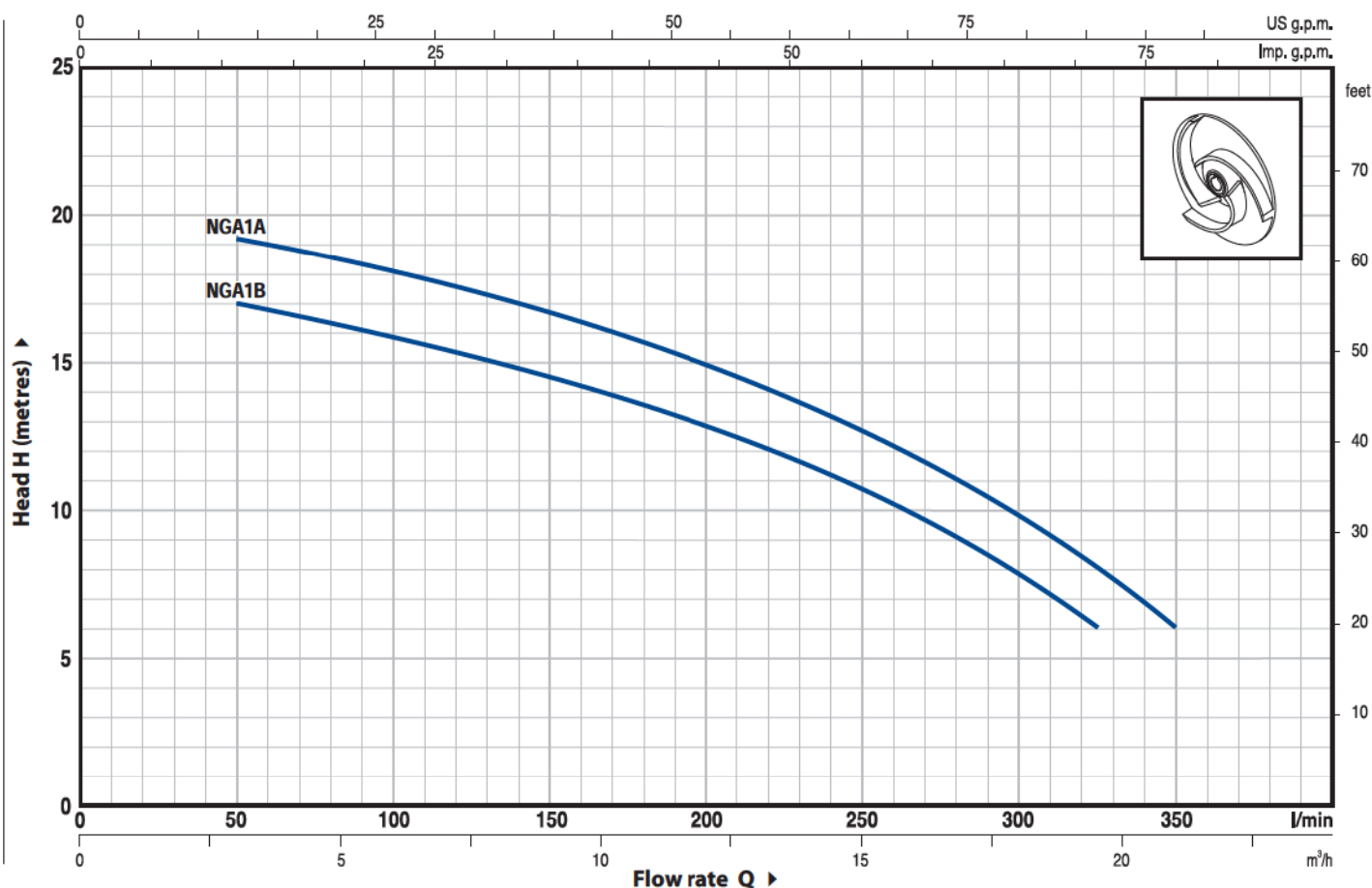
- Pump with technopolymer impeller
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

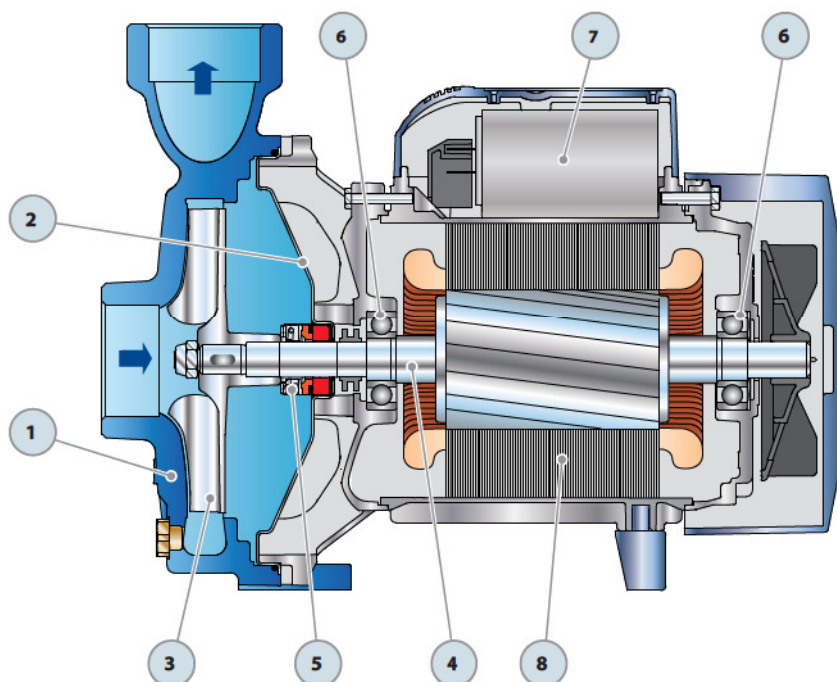


MODEL		POWER		Q	0	3	6	9	12	15	18	19.5	21
Single-phase	Three-phase	kW	HP		0	50	100	150	200	250	300	325	350
NGAm 1B	NGA 1B	0.55	0.75	H metres	18	17	16	14.5	13	10.5	8	6	
NGAm 1A	NGA 1A	0.75	1		20	19.5	18	16.5	15	12.5	10	8	6

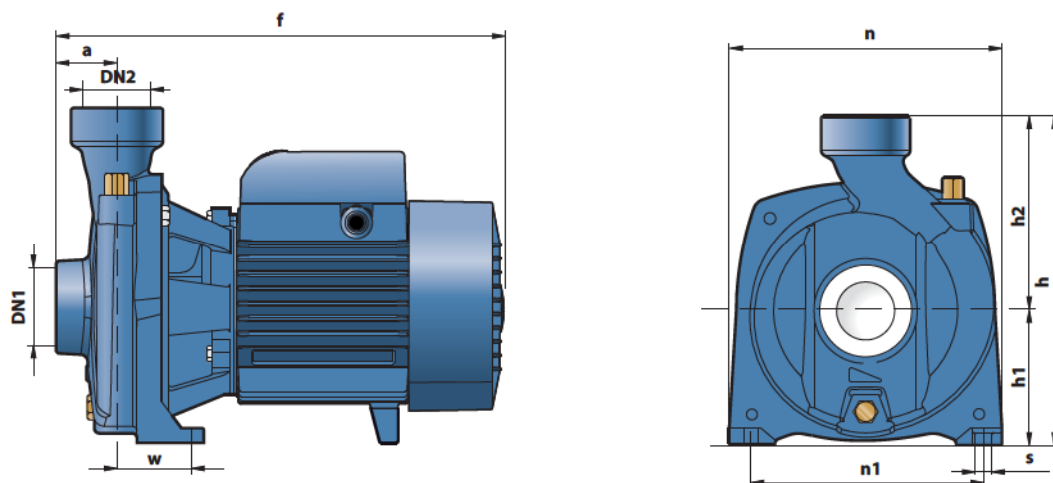
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLER	Open impeller in stainless steel 316				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	<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>
		AR-14	Ø 14 mm	Ceramic	Graphite	NBR
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>		
		NGAm 1B	16 µF 450 VL	60 µF 300 VL		
		NGAm 1A	20 µF 450 VL	60 µF 300 VL		
8	ELECTRIC MOTOR	NGAm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. NGA: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
NGAm 1B	NGA 1B	1½"	1½"	41	297	227	92	135	190	160	50	10	12.7	11.8
NGAm 1A	NGA 1A												12.8	11.9

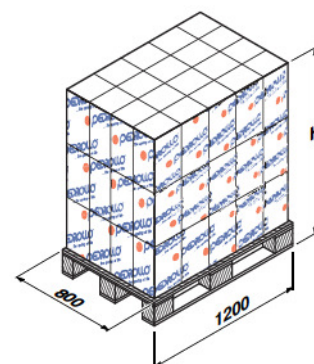
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
NGAm 1B	5.6 A	5.3 A	11.2 A
NGAm 1A	6.2 A	6.0 A	12.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
NGA 1B	3.3 A	1.9 A	1.1 A	3.2 A	1.85 A	1.1 A
NGA 1A	3.7 A	2.1 A	1.2 A	3.7 A	2.1 A	1.2 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
NGAm 1B	NGA 1B	70	1415	910	840	112	2180	1440	1340
NGAm 1A	NGA 1A	70	1415	920	850	112	2180	1450	1350



PRO-NGA

Stainless steel pump with open impeller



PERFORMANCE RANGE

- Flow rate up to **350 l/min** (21 m³/h)
- Head up to **20 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 **6 bar**
- Passage of suspended solids up to **Ø 10 mm**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



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. The open impeller design allows **liquids containing relatively high levels of impurities** to be pumped without the risk of the impeller clogging. All of the components in contact with the pumped liquid are constructed in stainless steel AISI 316. As a result of these characteristics the PRO-NGA series pumps find specific use in assemblies for washing fruit, vegetables, fish and shellfish, in industrial assemblies for washing metallic objects and glass containers, as well as for the circulation of cooling liquids. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

OPTIONALS AVAILABLE ON REQUEST

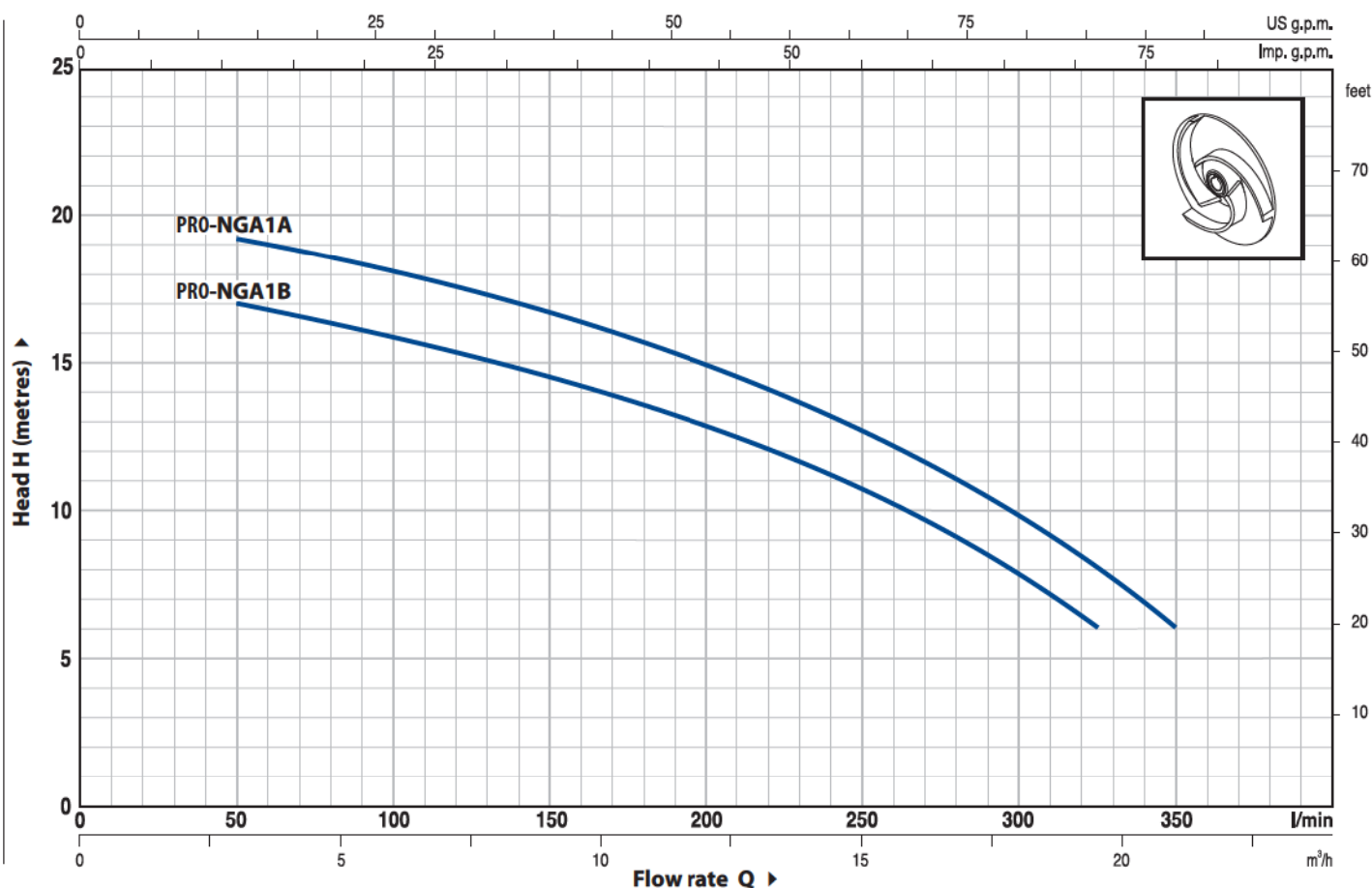
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

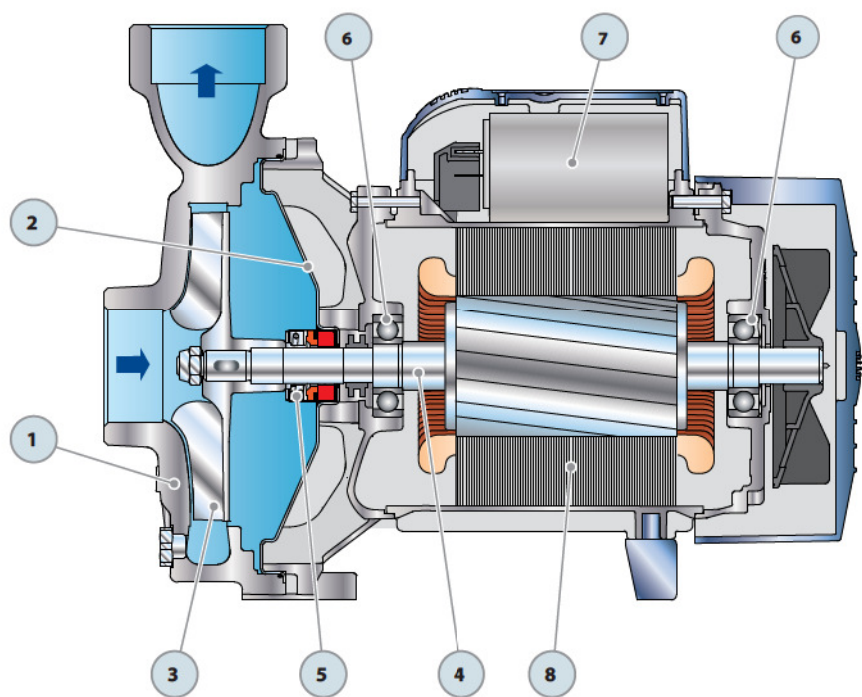


MODEL		POWER		Q	0	3	6	9	12	15	18	19.5	21
Single-phase	Three-phase	kW	HP		0	50	100	150	200	250	300	325	350
PRO-NGAm 1B	PRO-NGA 1B	0.55	0.75	H metres	18	17	16	14.5	13	10.5	8	6	
PRO-NGAm 1A	PRO-NGA 1A	0.75	1		20	19.5	18	16.5	15	12.5	10	8	6

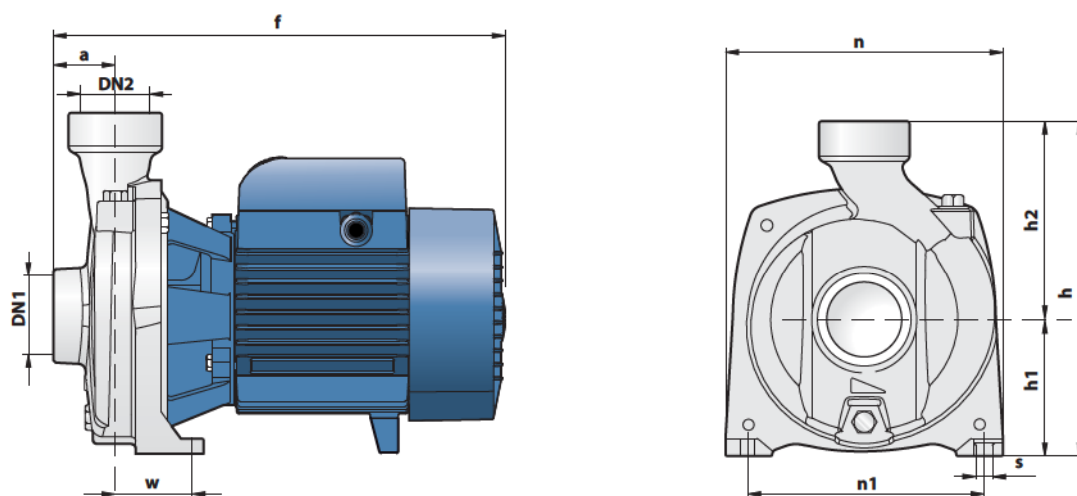
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Stainless steel AISI 316, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 316				
3	IMPELLER	Open impeller in stainless steel 316				
4	MOTOR SHAFT	Stainless steel AISI 316				
5	MECHANICAL SEAL	<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>
		AR-14S	Ø 14 mm	Ceramic	Graphite	Viton
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>	
		PRO-NGAm 1B	16 µF 450 VL	60 µF 300 VL		
		PRO-NGAm 1A	20 µF 450 VL	60 µF 300 VL		
8	ELECTRIC MOTOR	PRO-NGAm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PRO-NGA: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
PRO-NGAm 1B	PRO-NGA 1B	1½"	1½"	41	297	227	92	135	190	160	50	10	13.0	11.9
PRO-NGAm 1A	PRO-NGA 1A												13.1	12.0

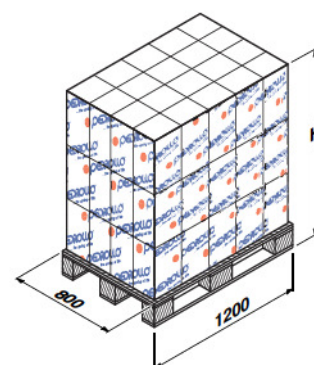
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PRO-NGAm 1B	5.6 A	5.3 A	11.2 A
PRO-NGAm 1A	6.2 A	6.0 A	12.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
PRO-NGA 1B	3.3 A	1.9 A	1.1 A	3.2 A	1.85 A	1.1 A
PRO-NGA 1A	3.6 A	2.1 A	1.2 A	3.5 A	2.0 A	1.2 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
PRO-NGAm 1B	PRO-NGA 1B	70	1415	930	850	112	2180	1480	1350
PRO-NGAm 1A	PRO-NGA 1A	70	1415	940	860	112	2180	1490	1360





PERFORMANCE RANGE

- Flow rate up to **450 l/min** (27 m³/h)
- Head up to **112 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
(up to +40 for the version with the technopolymer impeller)
- Ambient temperature between **-10 °C** and **+40 °C**
- Max. working pressure **10 bar**
(**6 bar** for 2CP25/130N)
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



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. The high efficiency and adaptability of these pumps to even the most unusual of applications, makes them ideal for use in the domestic, civil and industrial sectors; in particular for the distribution of water in combination with pressure sets, for pressure boosting and in fire-fighting sets.

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

OPTIONALS AVAILABLE ON REQUEST

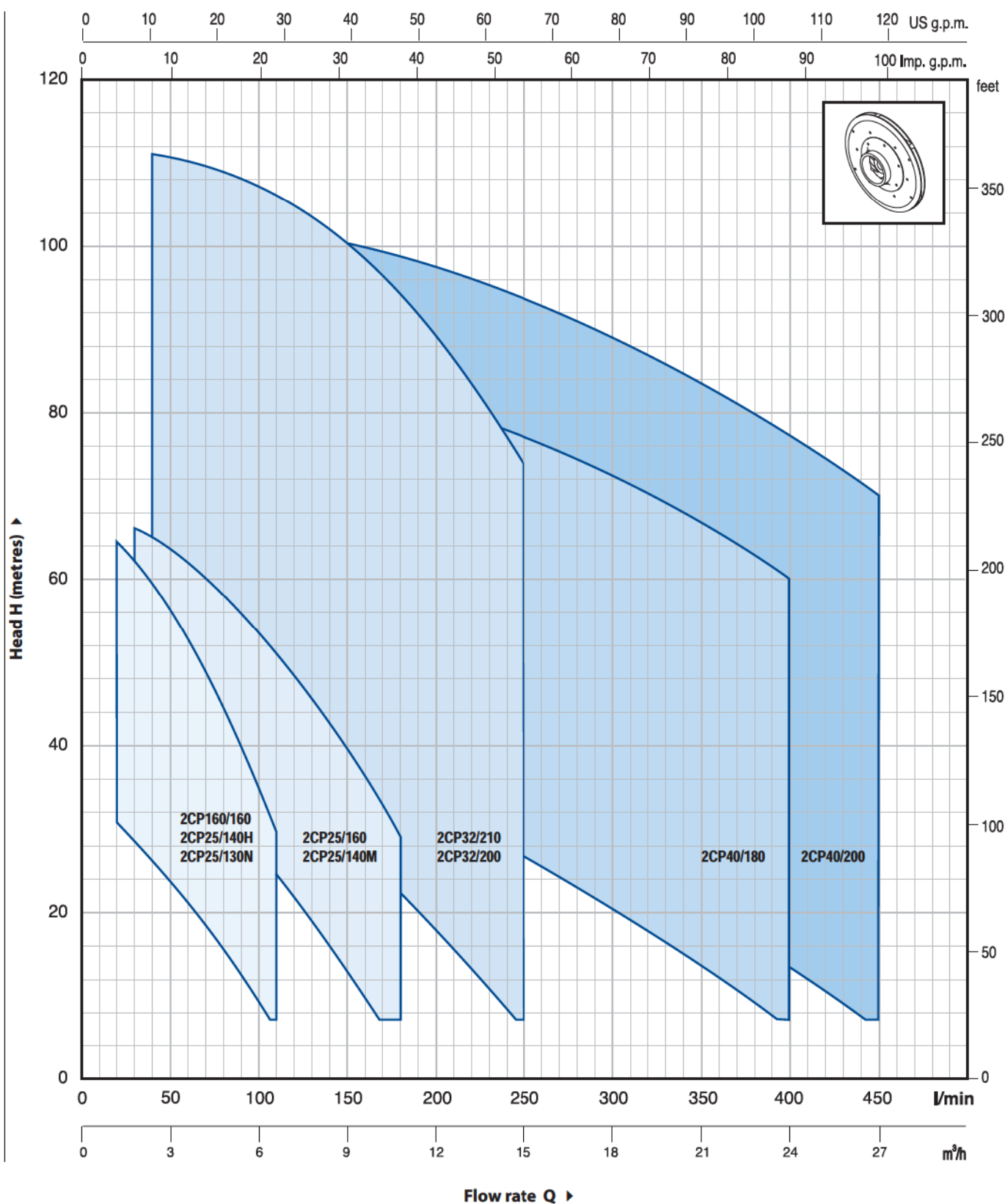
- Pumps with technopolymer impeller
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection for:
 - 2CP32/200, – 2CP40/180,
 - 2CP32/210, – 2CP40/200

GUARANTEE

2 years subject to terms and conditions

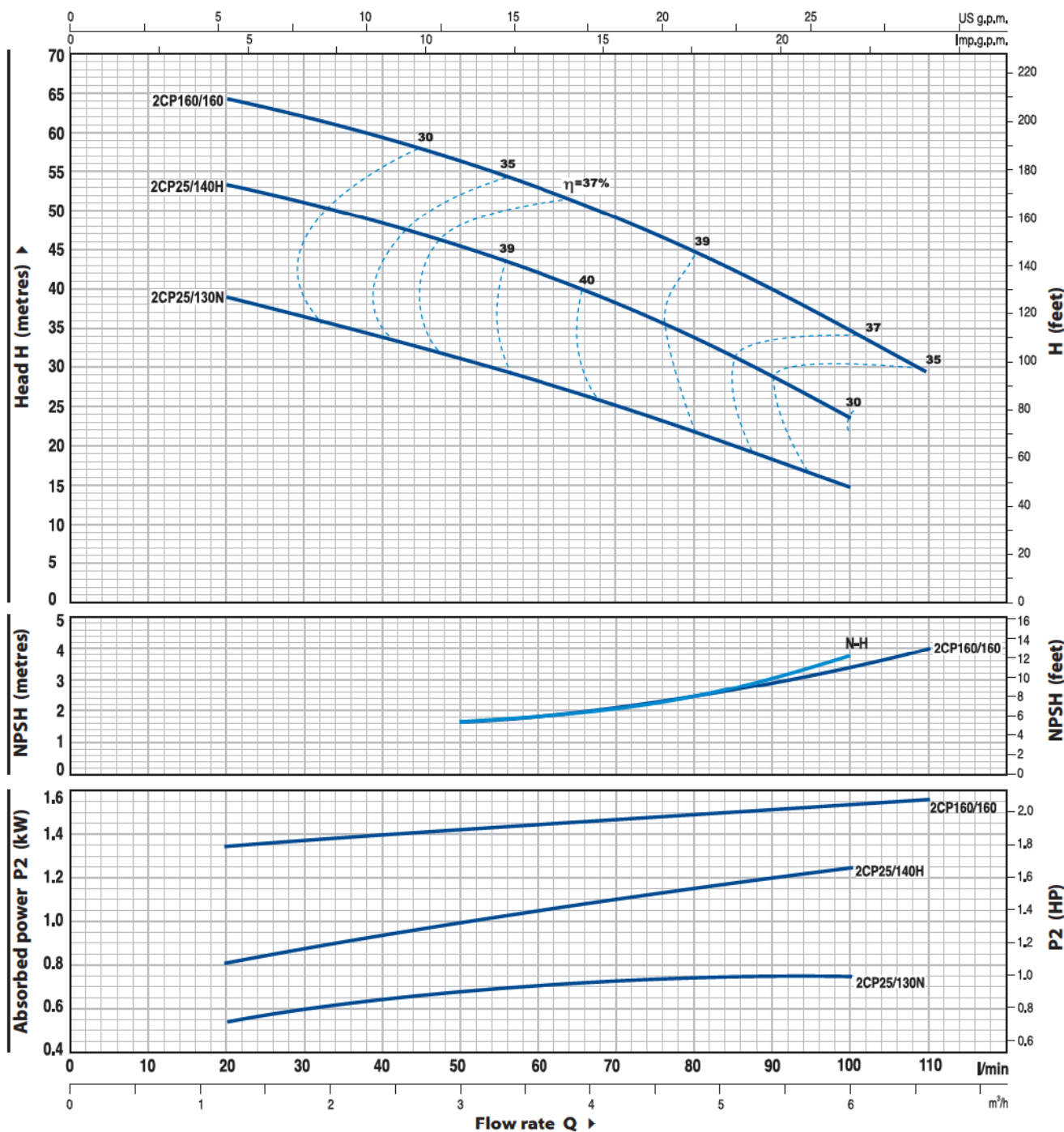
PERFORMANCE RANGE

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



CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



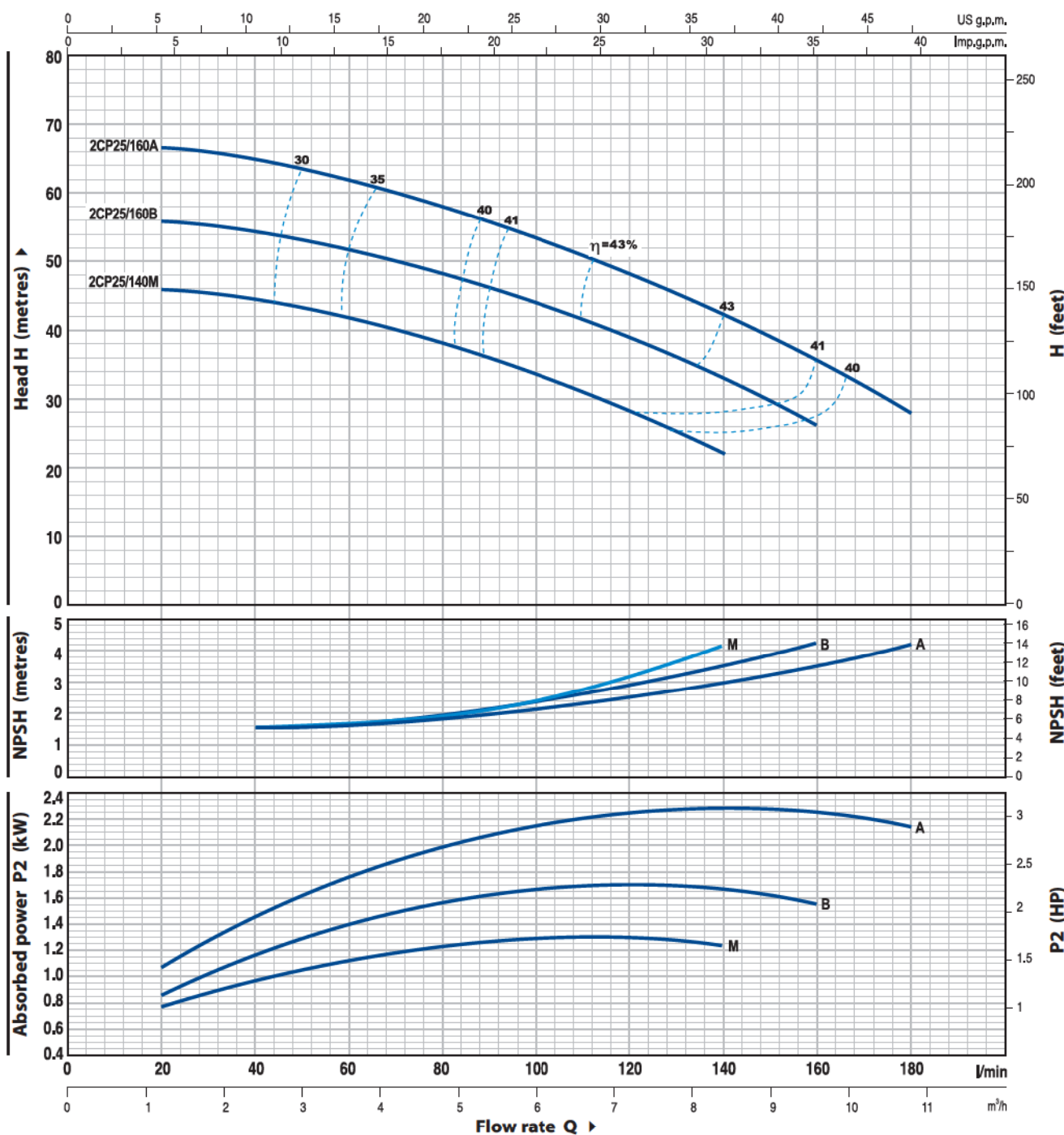
MODEL		POWER		Q	0	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6
Single-phase	Three-phase	kW	HP		0	20	30	40	50	60	70	80	90	100	110
2CPm 25/130N	2CP 25/130N	0.75	1	H metres	42	39	37	34	31	28.5	25.5	22	18	15	
2CPm 25/140H	2CP 25/140H	1.1	1.5		54	53	51	49	46	42	38	34	29	24	
2CPm 160/160	2CP 160/160	1.5	2		66	64	62	60	57	53	49	44	39.5	35	30

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



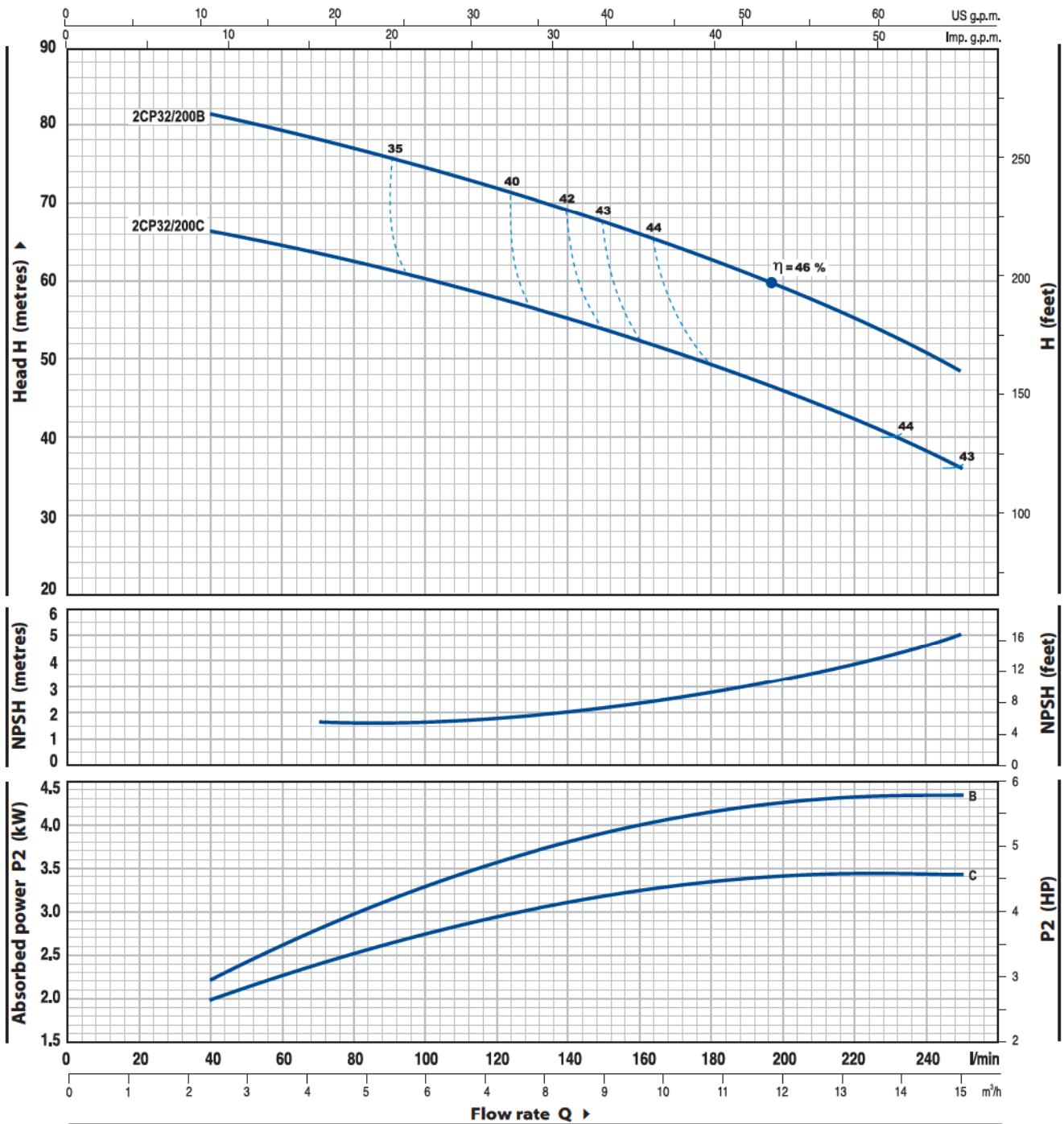
MODEL		POWER		Q	m³/h	0	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.5	8.4	9.6	10.8
Single-phase	Three-phase	kW	HP		l/min	0	20	30	40	50	60	70	80	90	100	110	125	140	160	180
2CPm 25/140M	2CP 25/140M	1.1	1.5	H metres	47	46	45.5	44	43	42	41	38	36	34	31	27	22			
2CPm 25/160B	2CP 25/160B	1.5	2		58	56	55	54	53	52	50	48	46	44	41	37	33	26		
–	2CP 25/160A	2.2	3		68	66.5	65.5	65	63	62	60	58	56	54	51	47	42	35	28	

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



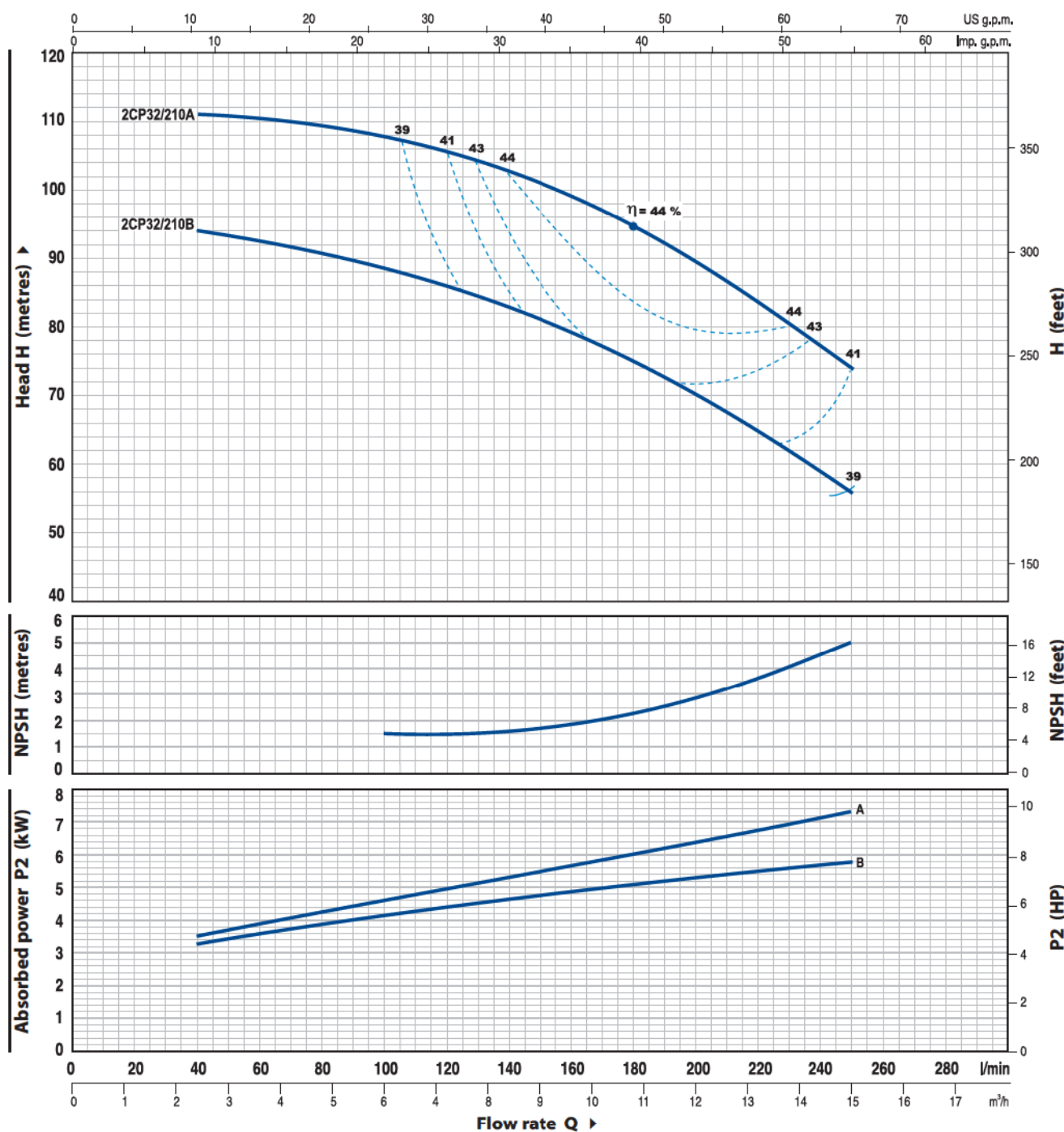
MODEL	POWER		Q	0	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.5	8.4	9.6	10.8	12.0	15.0
	kW	HP		0	40	50	60	70	80	90	100	110	125	140	160	180	200	250
2CP 32/200C	3	4	H metres	70	66.5	65.5	65	64	63	62	60.5	59	57	55	52	49.5	46.5	36
2CP 32/200B	4	5.5		85	81	80	79	78	77	76	75	74	72	69	66	62	58	49

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



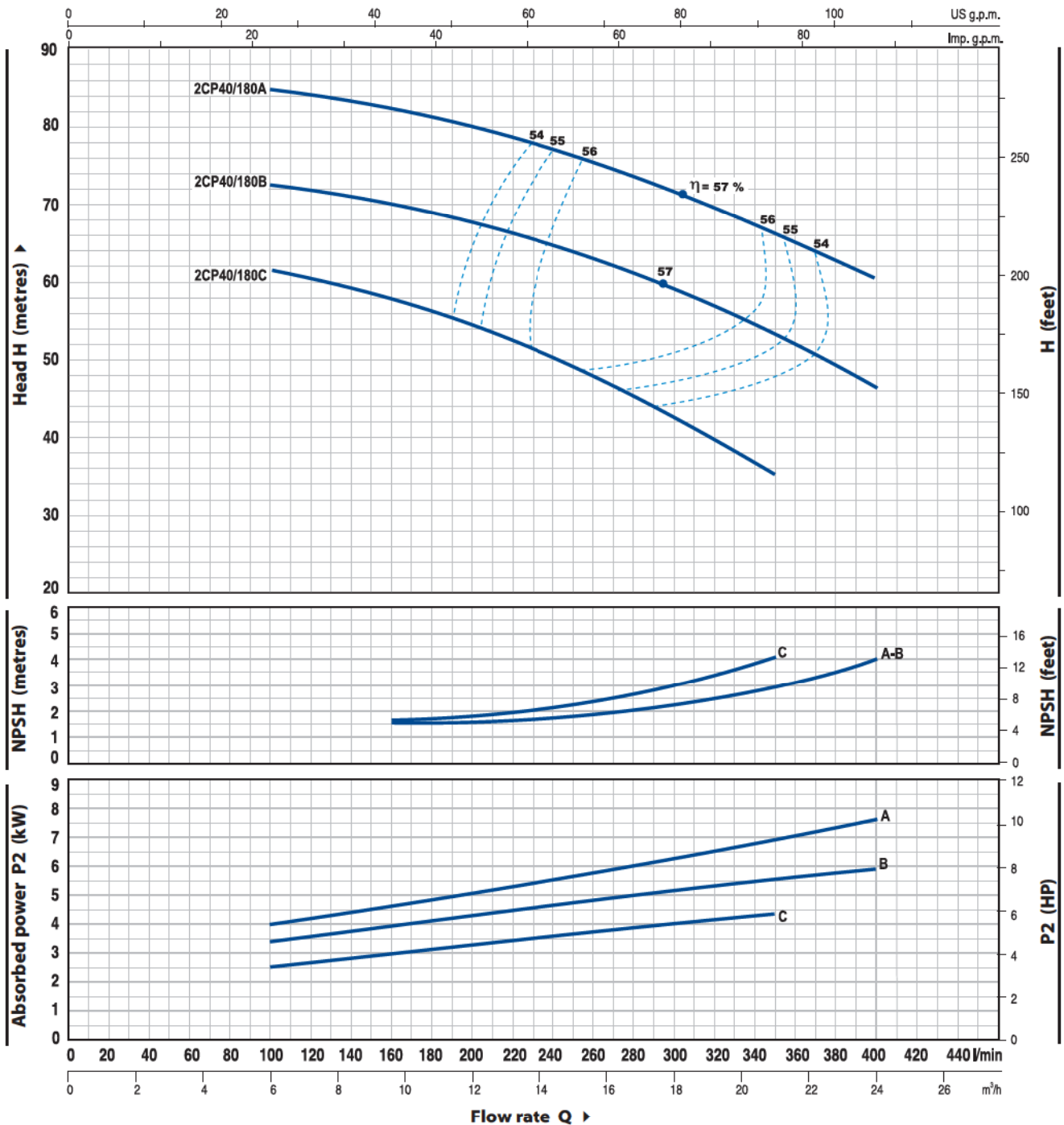
MODEL	POWER		Q	0	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.5	8.4	9.6	10.8	12.0	15.0
	kW	HP		0	40	50	60	70	80	90	100	110	125	140	160	180	200	250
Three-phase																		
2CP 32/210B	5.5	7.5	H metres	94	94	93.5	93	92	91	90	89	87	85	83	79	75	70	56
2CP 32/210A	7.5	10		112	111	110.8	110.5	110.3	110	109	108	107	105	102	99	94	89	74

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



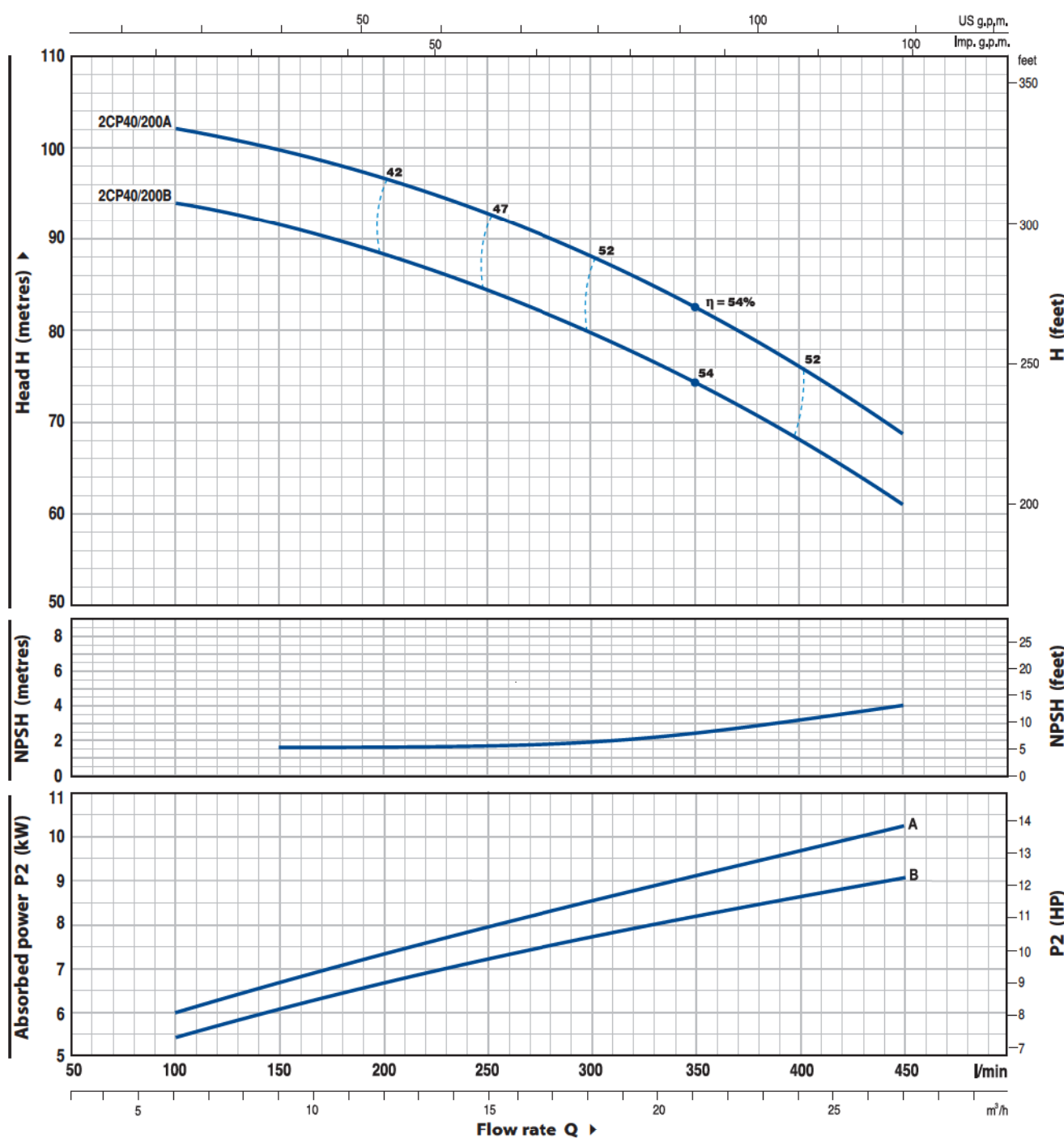
MODEL	POWER		Q	0	6.0	6.6	7.5	8.4	9.6	10.8	12.0	15.0	18.0	21.0	24.0
	kW	HP		0	100	110	125	140	160	180	200	250	300	350	400
Three-phase															
2CP 40/180C	4	5.5	H metres	64	62	61	60	59	58	56	54.5	49	43	35	
2CP 40/180B	5.5	7.5		76	73	72.5	72	71	70	69	67.5	64	59.5	54	46
2CP 40/180A	7.5	10		88	85	84.5	84	83	82	81	79.5	76	72	67	60

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



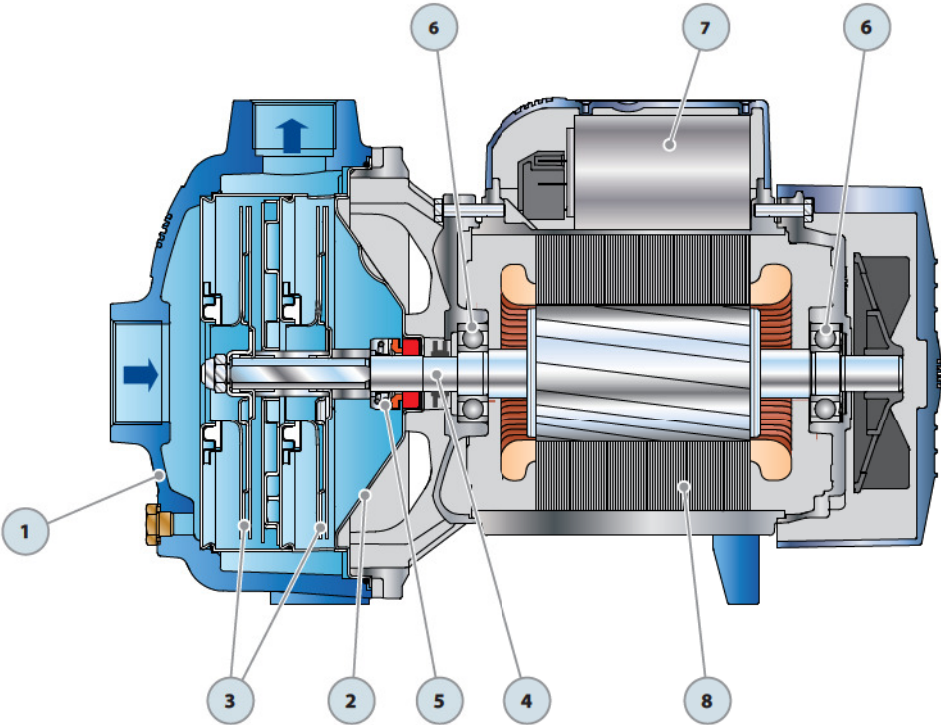
MODEL	POWER		Q	0	6.0	9	10.8	12.0	15.0	18.0	21.0	24.0	27.0
	kW	HP		0	100	150	180	200	250	300	350	400	450
Three-phase													
2CP 40/200B	9.2	12.5	H metres	97	94	92	90	88	85	80	74	68	61
2CP 40/200A	11	15		105	102	100	98	97	93	88	83	76	69

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

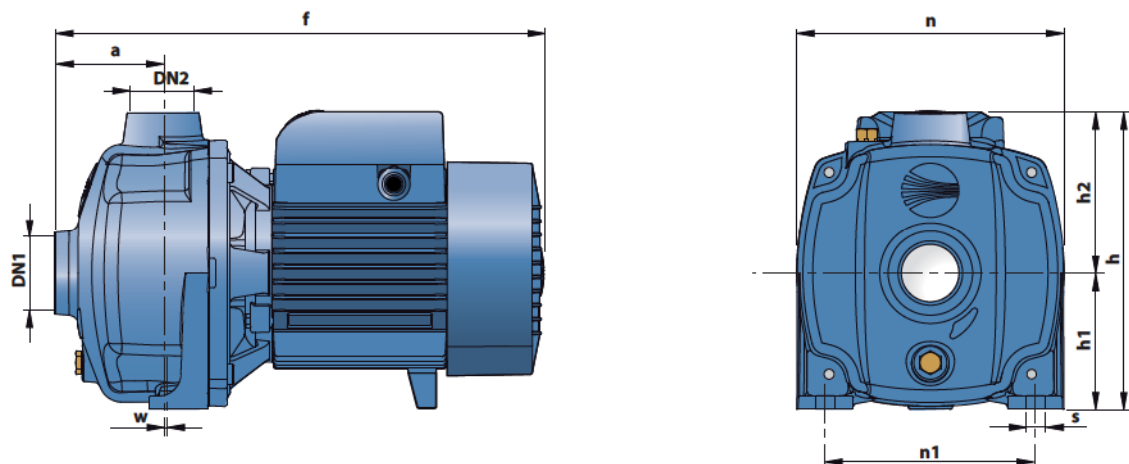
Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

2CP 25/130N

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLERS	Stainless steel AISI 304				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		AR-14	Ø 14 mm	Ceramic	Graphite	NBR
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)	(110 V)		
		2CPm 25/130N	20 µF 450 VL	60 µF 300 VL		
8	ELECTRIC MOTOR	2CPm 25/130N: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. 2CP 25/130N: three-phase 230/400 V - 50 Hz. ⇒ Pump fitted with the three-phase motor option offers IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
2CPm 25/130N	2CP 25/130N	1 1/4"	1"	73	330	201	92	109	180	142	1	10	14.5	14.0

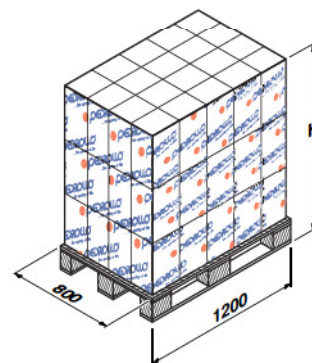
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
2CPm 25/130N	6.3 A	6.0 A	12.6 A

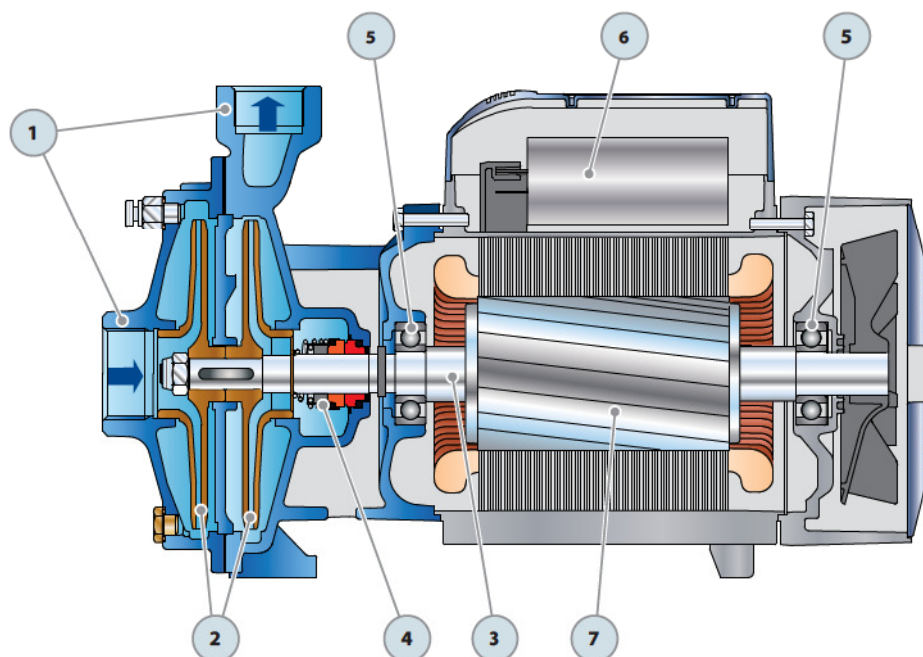
MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
2CP 25/130N	4.6 A	2.6 A	1.5 A	4.3 A	2.5 A	1.5 A

PALLETIZATION

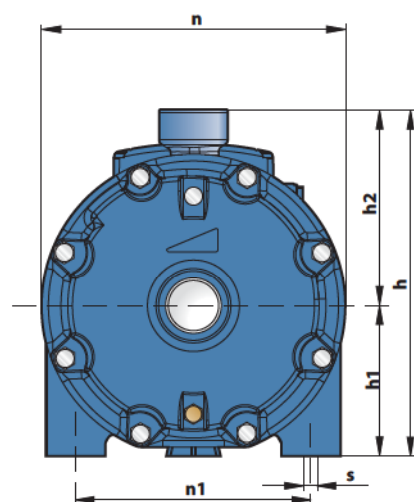
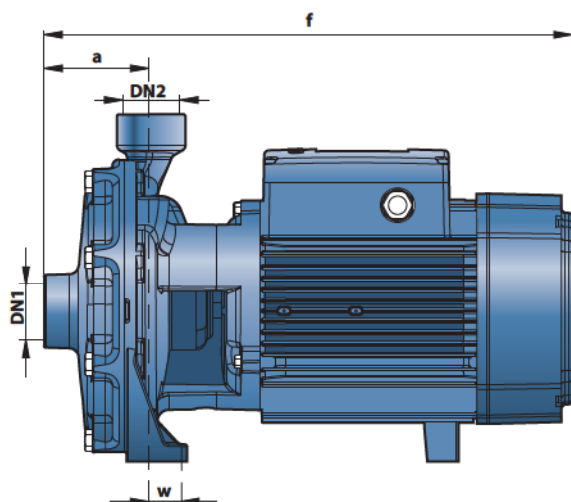
MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
2CPm 25/130N	2CP 25/130N	60	1320	890	860	84	1790	1240	1200



POS. COMPONENT		CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1					
2	IMPELLERS	Brass					
3	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104					
4	MECHANICAL SEAL	<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>
		2CP 25/140	FN-18	Ø 18 mm	Graphite	Ceramic	NBR
		2CP 25/160					
		2CP 160/160					
		2CP 32/200	FN-20	Ø 20 mm	Graphite	Ceramic	NBR
		2CP 32/210	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
		2CP 40/180					
		2CP 40/200	FN-32 NU	Ø 32 mm	Graphite	Ceramic	NBR
5	BEARINGS	<i>Pump</i>	<i>Model</i>				
		2CP 25/140	6204 ZZ / 6204 ZZ				
		2CP 25/160					
		2CP 160/160					
		2CP 32/200	6206 ZZ - C3 / 6206 ZZ - C3				
		2CP 32/210	6306 ZZ - C3 / 6206 ZZ - C3				
		2CP 40/180					
		2CP 40/200	6308 ZZ - C3 / 6308 ZZ - C3				
		6	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>		
<i>Single-phase</i>	<i>(230 V or 240 V)</i>			<i>(110 V)</i>			
2CPm 25/140	25 µF 450 VL			60 µF 250 VL			
2CPm 160/160	45 µF 450 VL			80 µF 250 VL			
2CPm 25/160B	45 µF 450 VL			80 µF 250 VL			
7	ELECTRIC MOTOR	2CPm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. 2CP: 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 44.					



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~
2CPm 25/140H	2CP 25/140H	1 1/4"	1"	74	382	225	93	132	200	162	23	10	18.9	18.3
2CPm 160/160	2CP 160/160			84	405	263	110	153	225	185	26	11	24.5	23.3
2CPm 25/140M	2CP 25/140M			74	382	225	93	132	200	162	23	10	18.9	18.3
2CPm 25/160B	2CP 25/160B-A	1 1/2"	1"	86	407	263	110	153	225	185	26	11	24.3	23.2/ 24.5
-	2CP 32/200C-B			95	464	304	132	172	266	206	19	-	-	38.0/43.0
-	2CP 32/210B-A	2"	1 1/4"	-	542	-	-	-	-	-	-	-	-	54.0/61.0
-	2CP 40/180C		1 1/2"	108	496	334	139	195	292	232	21	14	-	49.0
-	2CP 40/180B-A			-	542	-	-	-	-				-	54.0/60.0
-	2CP 40/200B-A			110	566	355	160	195	298				-	89.0/90.0

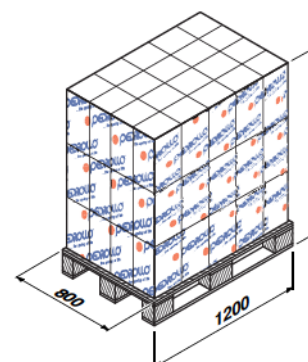
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
2CPm 25/140H	7.6 A	7.0 A	15.2 A
2CPm 160/160	11.0 A	10.0 A	21.0 A
2CPm 25/140M	8.0 A	7.3 A	16.0 A
2CPm 25/160B	11.0 A	10.0 A	21.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
2CP 25/140H	5.7 A	3.3 A	1.9 A	5.2 A	3.0 A	1.7 A
2CP 160/160	8.0 A	4.6 A	2.7 A	7.0 A	4.0 A	2.3 A
2CP 25/140M	5.9 A	3.4 A	2.0 A	5.4 A	3.1 A	1.8 A
2CP 25/160B	8.0 A	4.6 A	2.7 A	7.7 A	4.4 A	2.6 A
2CP 25/160A	9.3 A	5.4 A	3.1 A	8.7 A	5.0 A	2.9 A
2CP 32/200C	12.8 A	7.4 A	4.3 A	12.3 A	7.1 A	4.1 A
2CP 32/200B	18.2 A	10.5 A	6.1 A	17.7 A	10.2 A	5.9 A
2CP 32/210B	21.7 A	12.5 A	7.2 A	19.9 A	11.5 A	6.7 A
2CP 32/210A	27.7 A	16.0 A	9.2 A	26.0 A	15.0 A	8.7 A
2CP 40/180C	17.0 A	9.8 A	5.7 A	16.5 A	9.5 A	5.5 A
2CP 40/180B	21.3 A	12.3 A	7.1 A	20.8 A	12.0 A	6.9 A
2CP 40/180A	26.7 A	15.4 A	8.9 A	26.0 A	15.0 A	8.7 A
2CP 40/200B	-	17.5 A	10.1 A	-	17.5 A	10.1 A
2CP 40/200A	-	20.0 A	11.5 A	-	20.0 A	11.5 A

PALLETIZATION

MODEL		GROUPAGE			CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	n° pumps	H (mm)	kg	
				1~			1~	3~
2CPm 25/140H	2CP 25/140H	50	1370	960	70	1860	1340	1300
2CPm 160/160	2CP 160/160	50	1540	1240	70	2100	1730	1650
2CPm 25/140M	2CP 25/140M	50	1370	960	70	2860	1340	1300
2CPm 25/160B	2CP 25/160B	50	1540	1230	70	2100	1720	1640
-	2CP 25/160A	50	1540	-	70	2100	-	1730
-	2CP 32/200C	18	1420	-	24	1840	-	930
-	2CP 32/200B	18	1420	-	24	1840	-	1050
-	2CP 32/210B	12	1420	-	16	1840	-	880
-	2CP 32/210A	12	1420	-	16	1840	-	1000
-	2CP 40/180C	12	1420	-	16	1840	-	800
-	2CP 40/180B	12	1420	-	16	1840	-	880
-	2CP 40/180A	12	1420	-	16	1840	-	980
-	2CP 40/200B	6	1200	-	9	1730	-	818
-	2CP 40/200A	6	1200	-	9	1730	-	827



2÷4CP

Multi-stage centrifugal pumps



PERFORMANCE RANGE

- Flow rate up to **130 l/min** (7.8 m³/h)
- Head up to **50 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 bar**
- Continuous service **S1**

SAFETY STANDARDS

EN 60335-1
IEC 60335-1
CEI 61-150

EN 60034-1
IEC 60034-1
CEI 2-3



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 quietness, these pumps are widely used in domestic applications such as the distribution of water in combination with small and medium sized pressure sets, and for the irrigation of gardens and allotments, 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° 342159-0006

OPTIONALS AVAILABLE ON REQUEST

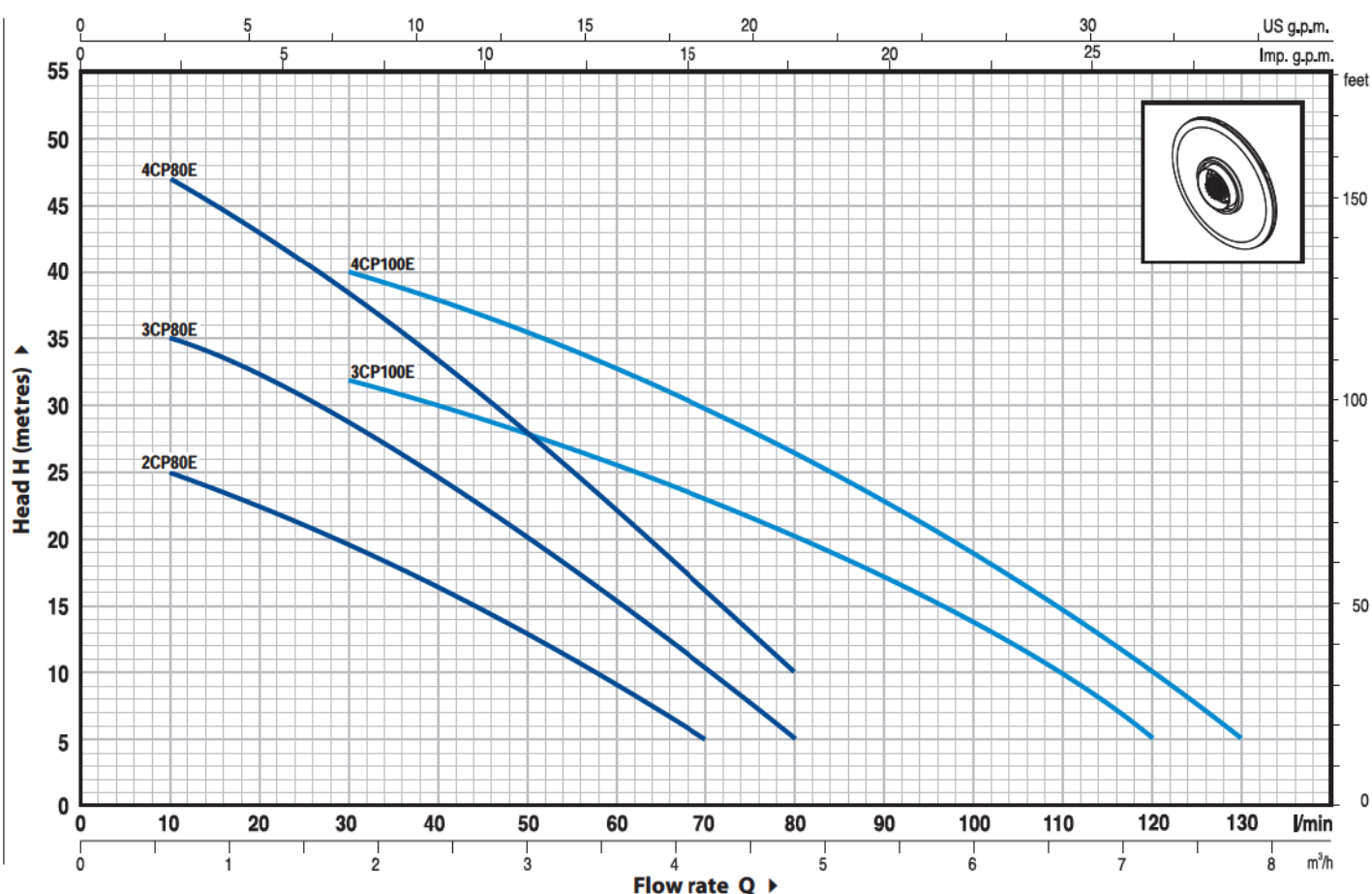
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

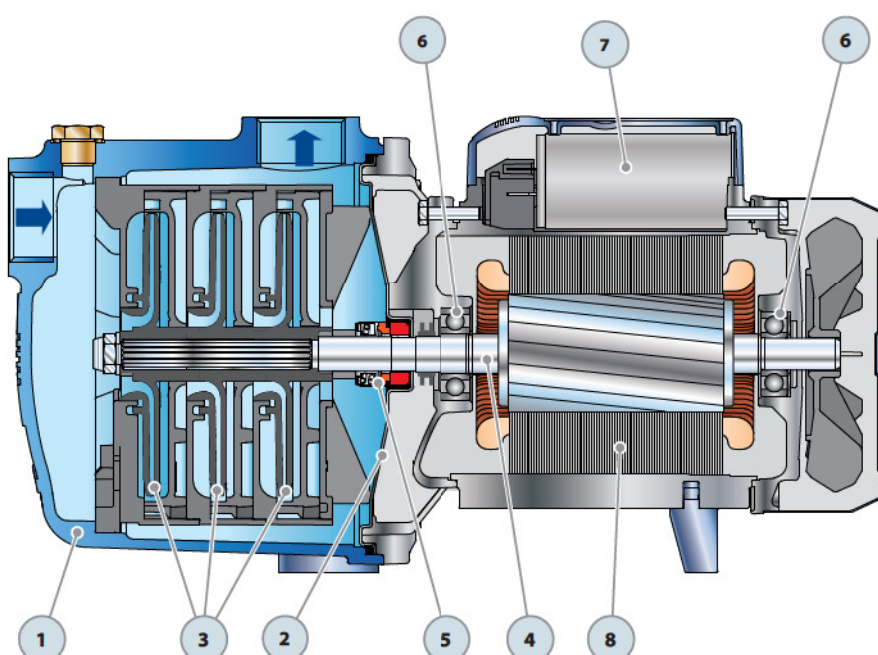


MODEL		POWER		Q	m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8
Single-phase	Three-phase	kW	HP		l/min	0	5	10	15	20	25	30	40	50	60	70	80	90	100	110	120	130
2CPm 80E	–	0.37	0.50	H metres		27	26	25	24	22.5	21	20	16.5	13	9	5						
3CPm 80E	3CP 80E	0.45	0.60			38	36	35	34	33.5	31	29	25	20	15.5	10	5					
4CPm 80E	4CP 80E	0.60	0.85			50	48	47	45	43	40.5	38.5	33.5	28	22.5	16	10					
3CPm 100E	3CP 100E	0.60	0.85			36	35.5	35	34	33.5	32.5	32	30	28	26	23	20	17	13.5	10	5	
4CPm 100E	4CP 100E	0.75	1			46	45	44	43	42	41	40	38	35.5	33	30	26.5	22.5	19	15	10	5

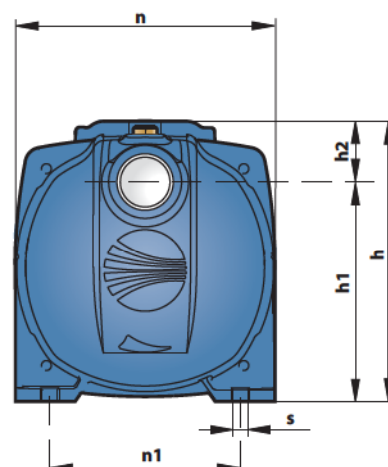
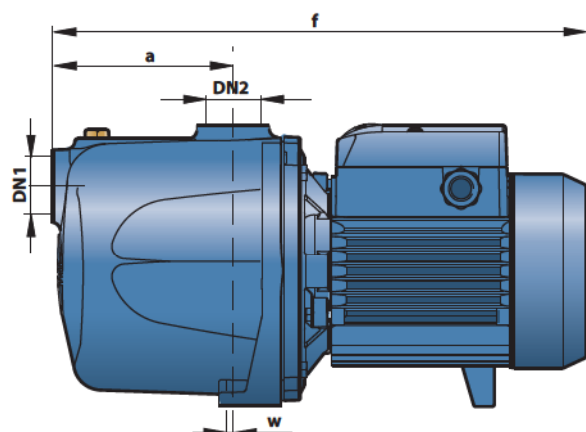
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLERS	Noryl GFN2V				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	<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>
		AR-13	Ø 13 mm	Ceramic	Graphite	NBR
6	BEARINGS	<i>Pump</i>	<i>Model</i>			
		2CPm 80E	6202 ZZ - C3 / 6201 ZZ			
		3CPm 80E				
		4CPm 80E				
		3CP 100E	6203 ZZ / 6203 ZZ			
		4CP 100E				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>		
		2CPm 80E	10 µF 450 VL	25 µF 250 VL		
		3CPm 80E	12.5 µF 450 VL	30 µF 250 VL		
		4CPm 80E	14 µF 450 VL	30 µF 250 VL		
		3CPm 100E	20 µF 450 VL	60 µF 300 VL		
		4CPm 100E				
8	ELECTRIC MOTOR	2-3-4CPm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. 2-3-4CP: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
2CPm 80E	—	1"	1"	110	334	172	134	38	158	116	2	9	9.0	—
3CPm 80E	3CP 80E												9.8	9.3
4CPm 80E	4CP 80E			135	357									
3CPm 100E	3CP 100E			110	334									
4CPm 100E	4CP 100E			135	378	191	61					13.7	12.7	

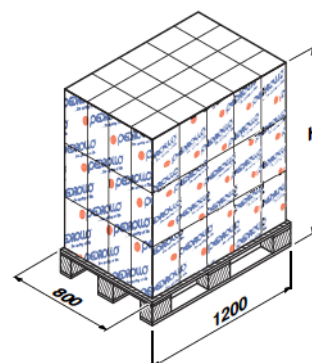
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
2CPm 80E	2.4 A	2.4 A	4.8 A
3CPm 80E	3.4 A	3.3 A	6.8 A
4CPm 80E	4.3 A	4.2 A	8.6 A
3CPm 100E	4.1 A	4.0 A	8.2 A
4CPm 100E	6.0 A	5.8 A	12.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
3CP 80E	2.5 A	1.4 A	0.8 A	2.4 A	1.4 A	0.8 A
4CP 80E	3.4 A	2.0 A	1.1 A	3.3 A	1.9 A	1.1 A
3CP 100E	3.1 A	1.8 A	1.0 A	3.0 A	1.7 A	1.0 A
4CP 100E	4.5 A	2.6 A	1.5 A	4.3 A	2.5 A	1.4 A

PALLETIZATION

MODEL		GROUPAGE			CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	n° pumps	H (mm)	kg	
2CPm 80E	–	98	1440	900	154	2180	1400	–
3CPm 80E	3CP 80E	98	1440	980	154	2180	1530	1450
4CPm 80E	4CP 80E	98	1440	1100	154	2180	1710	1620
3CPm 100E	3CP 100E	98	1440	1040	154	2180	1620	1540
4CPm 100E	4CP 100E	98	1540	1360	140	2140	1940	1800



2÷4CR

Multi-stage centrifugal pumps



PERFORMANCE RANGE

- Flow rate up to **120 l/min** (7.2 m³/h)
- Head up to **50 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 bar**
- Continuous service **S1**

SAFETY STANDARDS

EN 60335-1
IEC 60335-1
CEI 61-150

EN 60034-1
IEC 60034-1
CEI 2-3



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 quietness, these pumps are widely used in domestic applications such as the distribution of water in combination with small and medium sized pressure sets, and for the irrigation of gardens and allotments, etc.

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

OPTIONALS AVAILABLE ON REQUEST

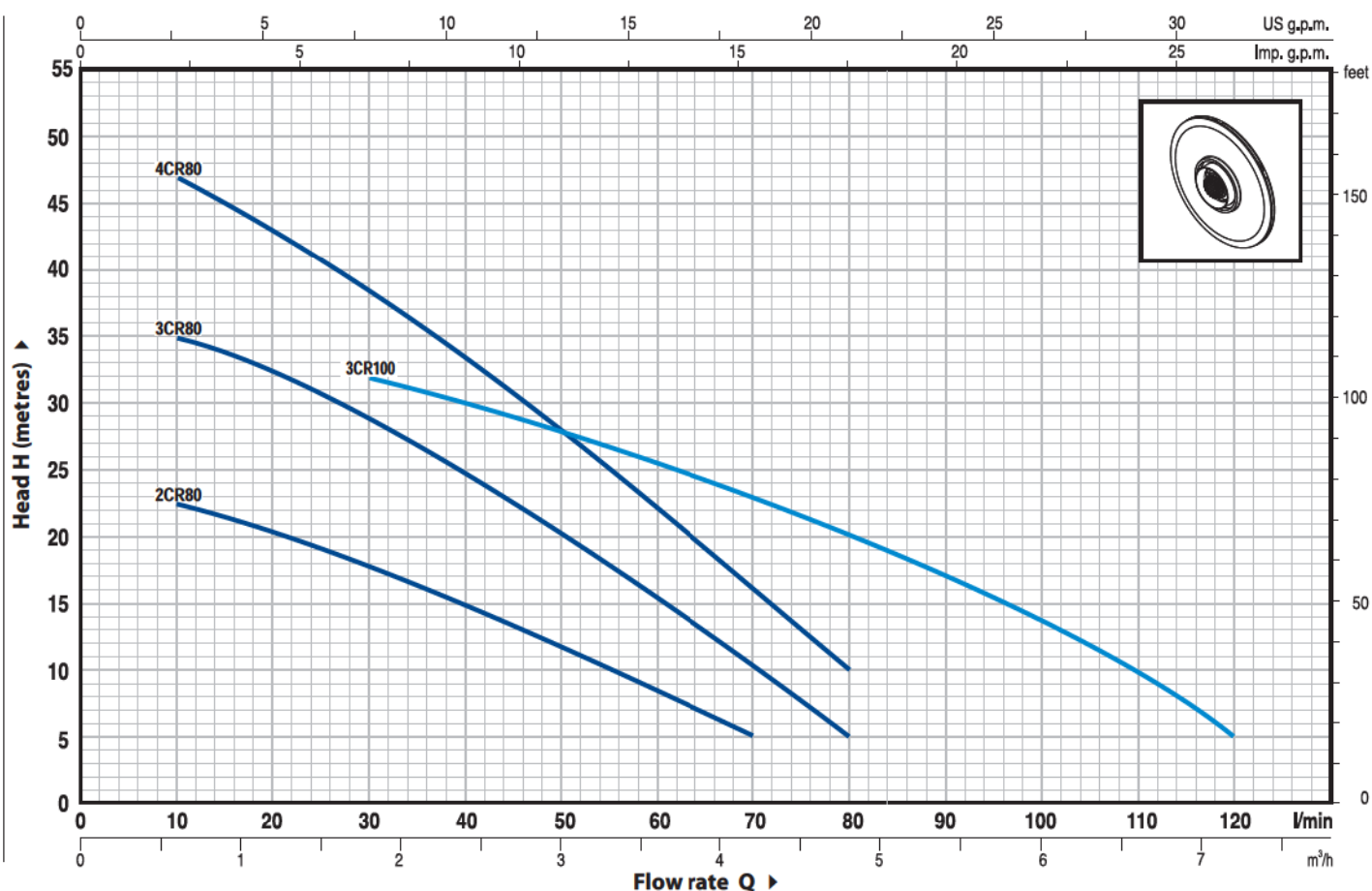
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

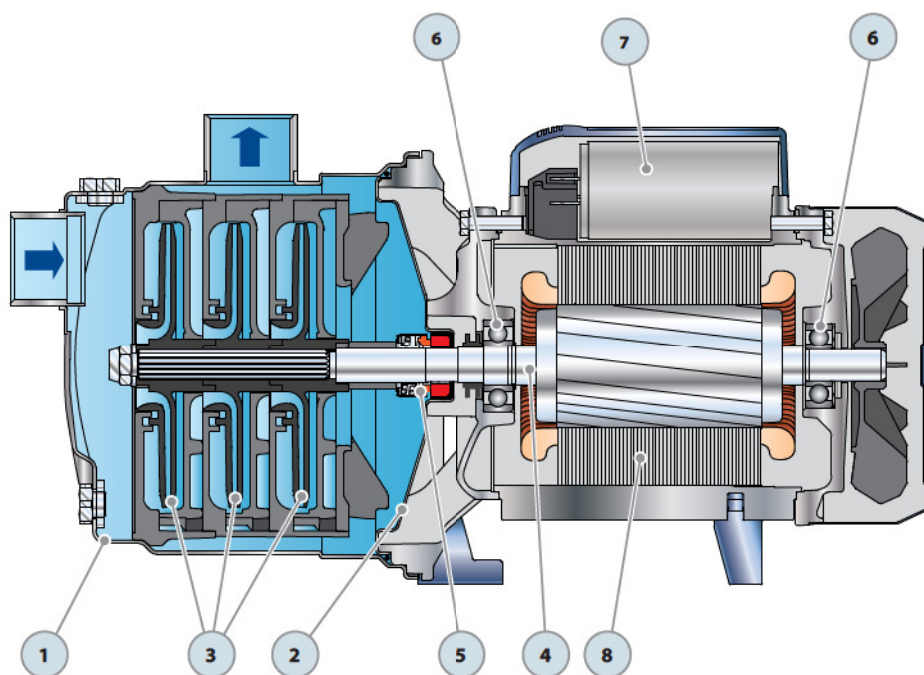


MODEL		POWER		Q	m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2
Single-phase	Three-phase	kW	HP		l/min	0	5	10	15	20	25	30	40	50	60	70	80	90	100	110	120
2CRm 80	–	0.37	0.50	H metres	25	24	22.5	21.5	20	19	17.5	15	11.5	8	5						
3CRm 80	3CR 80	0.45	0.60		38	36	35	34	32.5	31	29	25	20	15.5	10	5					
4CRm 80	4CR 80	0.60	0.85		50	48	47	45	43	40.5	38.5	33.5	28	22.5	16	10					
3CRm 100	3CR 100	0.60	0.85		36	35.5	35	34	33.5	32.5	32	30	28	25.5	23	20	17	13.5	10	5	

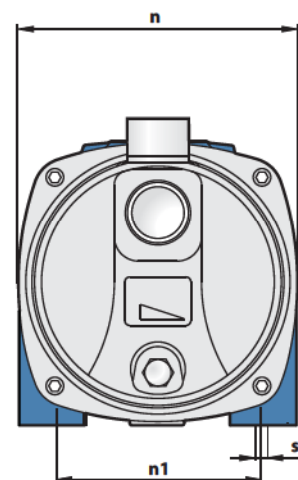
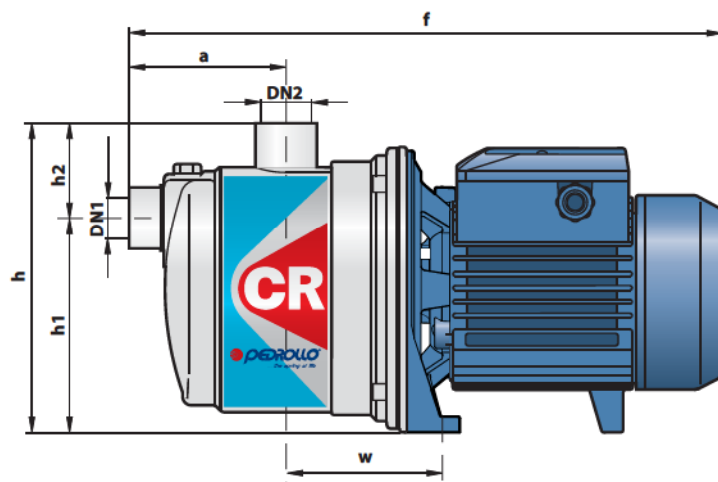
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Stainless steel AISI 304, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLERS	Noryl GFN2V				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	<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>
		AR-13	Ø 13 mm	Ceramic	Graphite	NBR
6	BEARINGS	6202 ZZ- C3 / 6201 ZZ				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>		
		2CRm 80	10 µF 450 VL	25 µF 250 VL		
		3CRm 80	12.5 µF 450 VL	30 µF 250 VL		
		4CRm 80 3CRm 100	14 µF 450 VL	30 µF 250 VL		
8	ELECTRIC MOTOR	2÷4CRm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. 2÷4CR: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
2CRm 80	–	1"	1"	90	345	174	122	52	160	120	88	9	5.9	–
3CRm 80	3CR 80												6.8	6.2
4CRm 80	4CR 80												7.3	6.8
3CRm 100	3CR 100												7.2	6.7

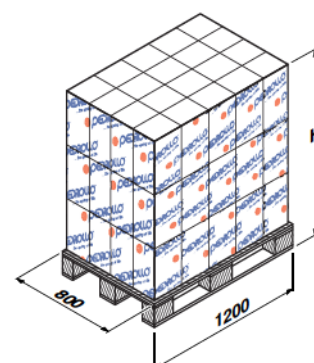
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
2CRm 80	2.4 A	2.4 A	4.8 A
3CRm 80	3.2 A	2.9 A	6.5 A
4CRm 80	4.0 A	3.6 A	8.0 A
3CRm 100	4.0 A	3.6 A	8.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
3CR 80	2.2 A	1.3 A	0.8 A	2.1 A	1.2 A	0.7 A
4CR 80	2.9 A	1.7 A	1.0 A	2.8 A	1.6 A	0.9 A
3CR 100	2.9 A	1.7 A	1.0 A	2.8 A	1.6 A	0.9 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
2CRm 80	–	98	1440	600	–	154	2180	930	–
3CRm 80	3CR 80	98	1440	690	630	154	2180	1070	970
4CRm 80	4CR 80	98	1440	730	680	154	2180	1140	1070
3CRm 100	3CR 100	98	1440	720	680	154	2180	1130	1050





PERFORMANCE RANGE

- Flow rate up to **50 l/min** (3 m³/h)
- Head up to **47 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 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



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. The self-priming JSW pumps are designed to pump water even in cases where air is present. As a result of their reliability and the fact that they are easy to use, they are recommended for use in domestic applications such as the distribution of water in combination with small or medium sized pressure sets, and for the irrigation of gardens and allotments, etc.

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

PATENTS - TRADE MARKS - MODELS

- Registered Italian model n° 72753
- European Patent n° 1 510 696

OPTIONALS AVAILABLE ON REQUEST

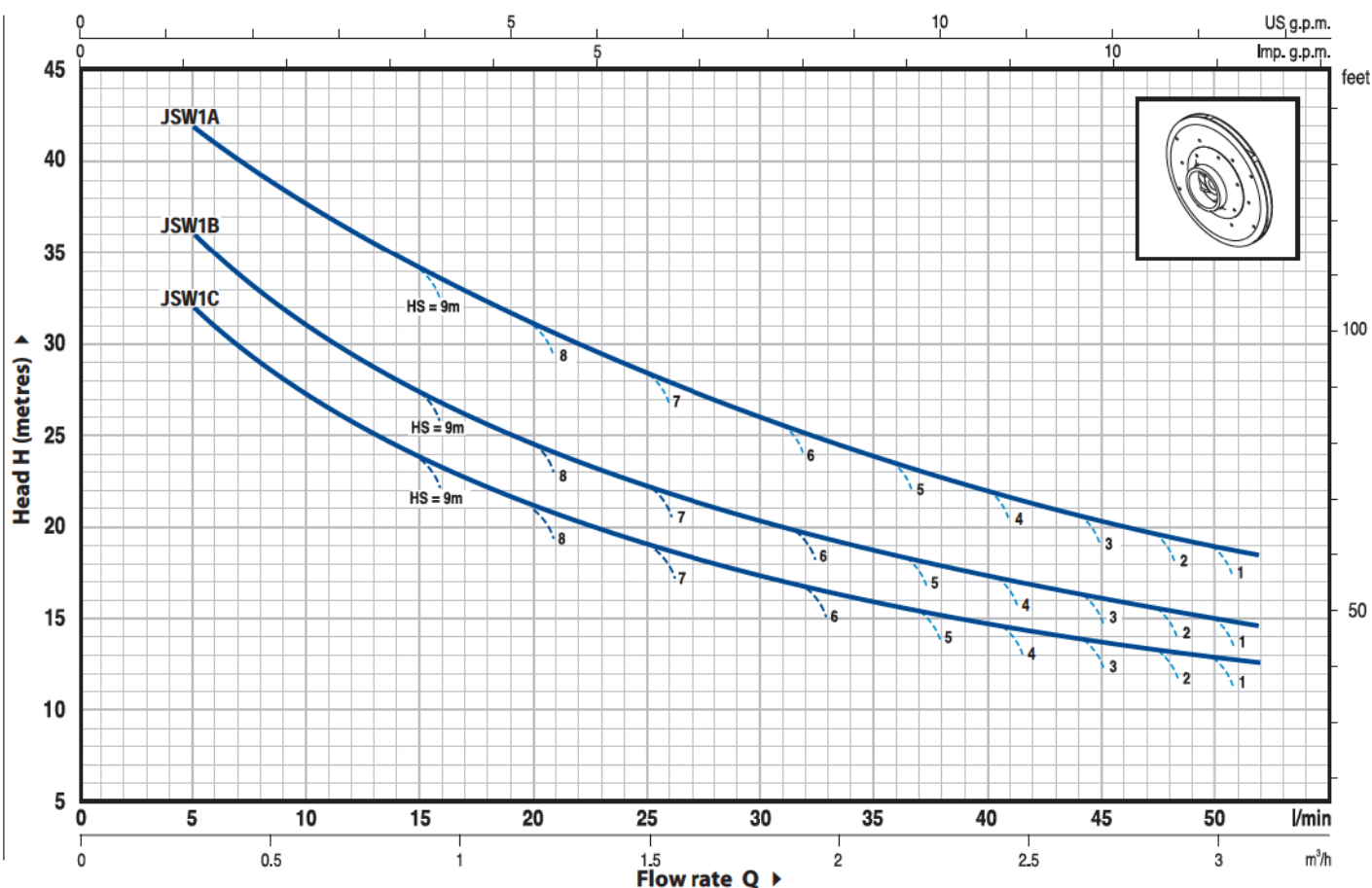
- Pumps with technopolymer impeller
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

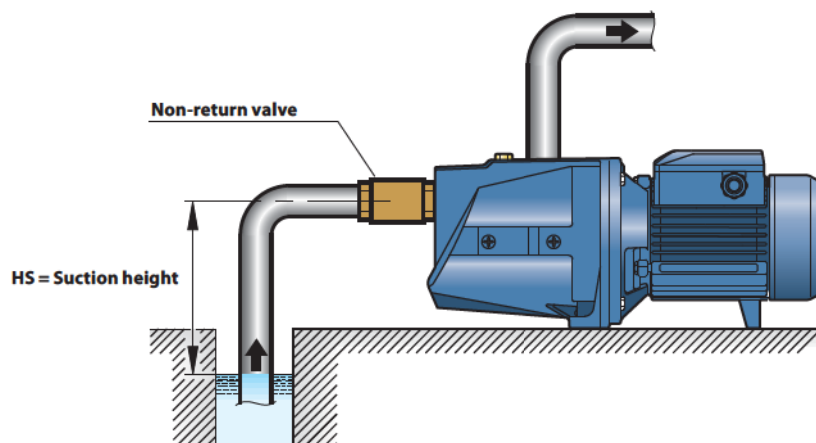


MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0
Single-phase	Three-phase	kW	HP		0	5	10	15	20	25	30	35	40	45	50
JSWm 1C	–	0.37	0.50	H metres	35	32	27	24	21	19	17	16	15	14	13
JSWm 1B	JSW 1B	0.50	0.70		41	36	31	27	24	22	20	19	17	16	15
JSWm 1A	JSW 1A	0.60	0.85		47	42	38	34	31	28.5	26	24	22	21.5	19

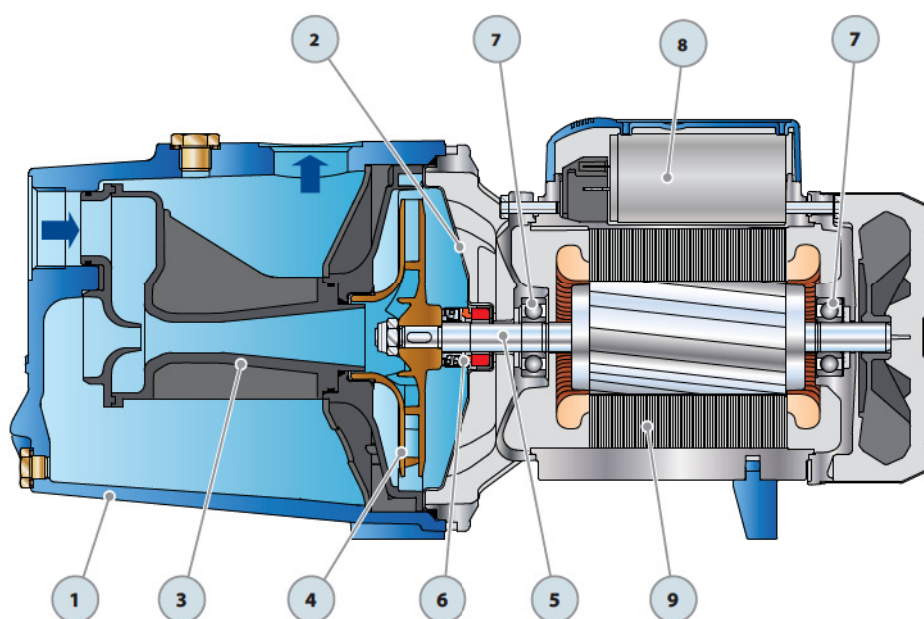
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

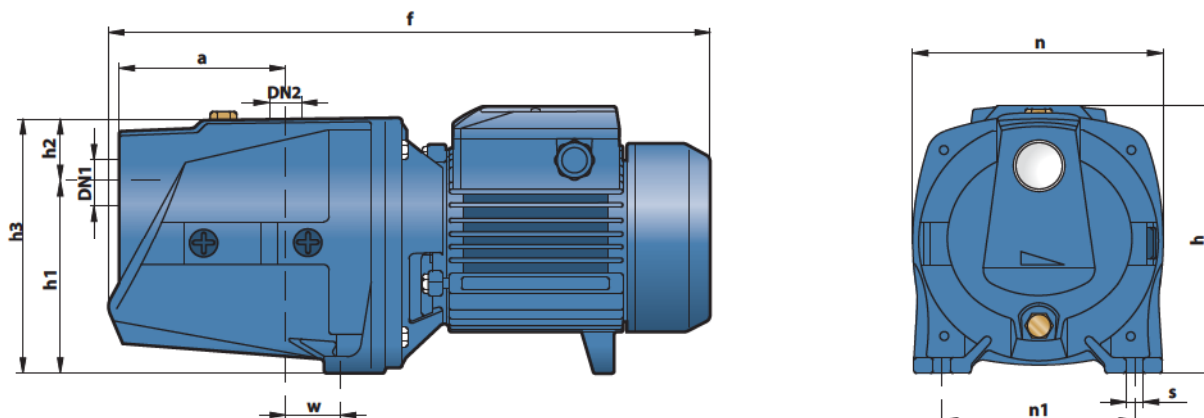
INSTALLATION EXAMPLE



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	NOZZLE ASSEMBLY	Noryl GFN2V				
4	IMPELLER	Brass				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	<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>
		AR-12	Ø 12 mm	Ceramic	Graphite	NBR
7	BEARINGS	6201 ZZ / 6201 ZZ				
8	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>	
		JSWm 1C	10 µF 450 VL	25 µF 250 VL		
		JSWm 1B	10 µF 450 VL	30 µF 250 VL		
		JSWm 1A	14 µF 450 VL	30 µF 250 VL		
9	ELECTRIC MOTOR	JSWm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. JSW: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	w	s	1~	3~
JSWm 1C	–	1"	1"	115	379	171	127	33.5	160.5	160	124	24	10	9.2	–
JSWm 1B	JSW 1B													10.0	9.5
JSWm 1A	JSW 1A													10.3	10.1

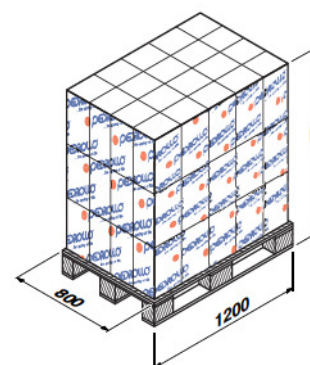
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
JSWm 1C	2.4 A	2.2 A	4.8 A
JSWm 1B	3.2 A	2.9 A	6.5 A
JSWm 1A	3.6 A	3.3 A	7.3 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
JSW 1B	2.1 A	1.2 A	0.7 A	2.0 A	1.2 A	0.7 A
JSW 1A	2.8 A	1.6 A	0.9 A	2.7 A	1.6 A	0.9 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
JSWm 1C	–	98	1440	920	–	154	2180	1440	–
JSWm 1B	JSW 1B	98	1440	1000	950	154	2180	1560	1480
JSWm 1A	JSW 1A	98	1440	1030	1010	154	2180	1600	1570





PERFORMANCE RANGE

- Flow rate up to **80 l/min** (4.8 m³/h)
- Head up to **70 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6.5 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



AN30



VpTECT-003

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. The self-priming JSW pumps are designed to pump water even in cases where air is present. As a result of their reliability and the fact that they are easy to use, they are recommended for use in domestic applications such as the distribution of water in combination with small or medium sized pressure sets, and for the irrigation of gardens and allotments, etc.

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

PATENTS - TRADE MARKS - MODELS

- Registered Italian model n° 72753
- European Patent n° 1 510 696

OPTIONALS AVAILABLE ON REQUEST

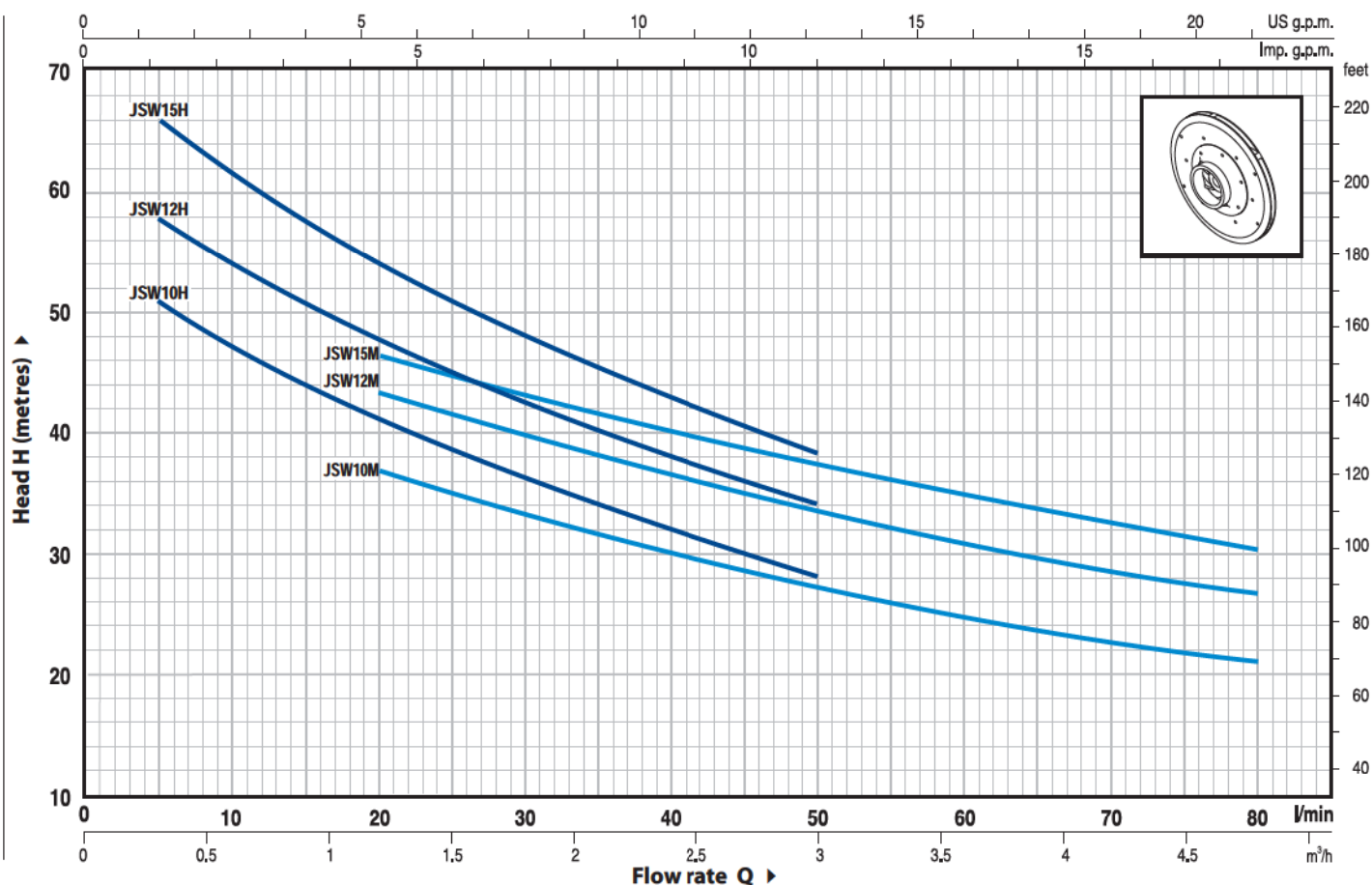
- Pumps with technopolymer impeller
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

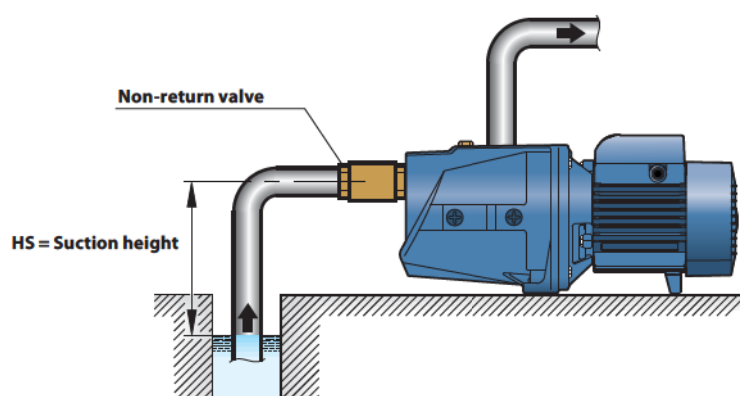


MODEL		POWER		Q														
Single-phase	Three-phase	kW	HP		m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.4	2.7	3.0	3.6	4.2	4.8
					l/min	0	5	10	15	20	25	30	40	45	50	60	70	80
JSWm 10H	JSW 10H	0.75	1	H metres		56	51	47	44	41	39	36	32	30	28			
JSWm 12H	JSW 12H	0.90	1.25			64	58	54	51	48	45	43	38	36	34			
JSWm 15H	JSW 15H	1.1	1.5			70	66	62	58	54	51	48	43	41	38			
JSWm 10M	JSW 10M	0.75	1			46	42	40	38	37	35	33	30	29	27	25	23	21
JSWm 12M	JSW 12M	0.90	1.25			50	48	46	44	42	41	39	36	35	33	31	29	27
JSWm 15M	JSW 15M	1.1	1.5			55	52	50	48	46	45	43	40	39	37	35	33	30

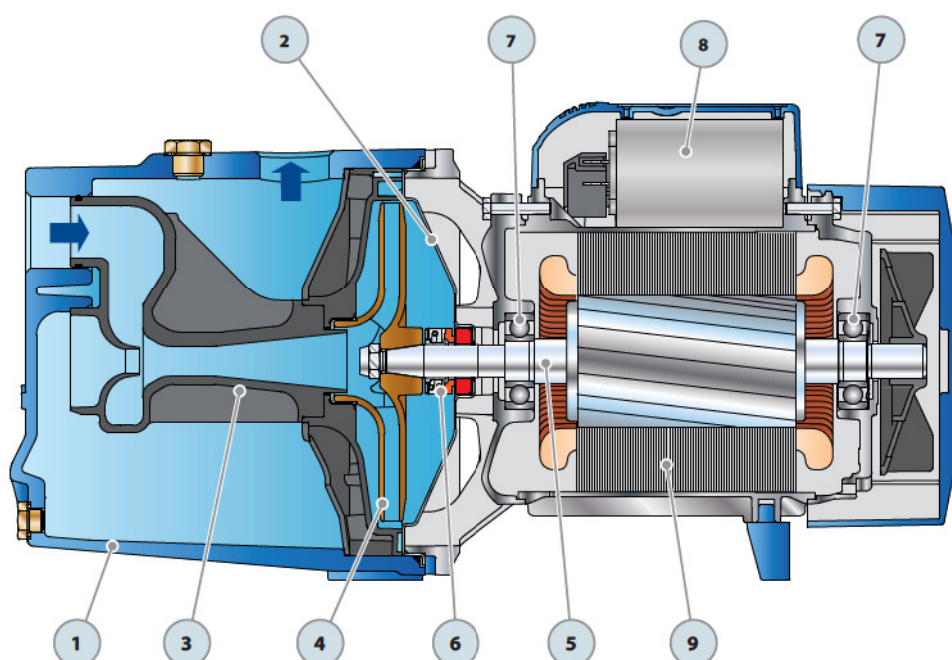
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

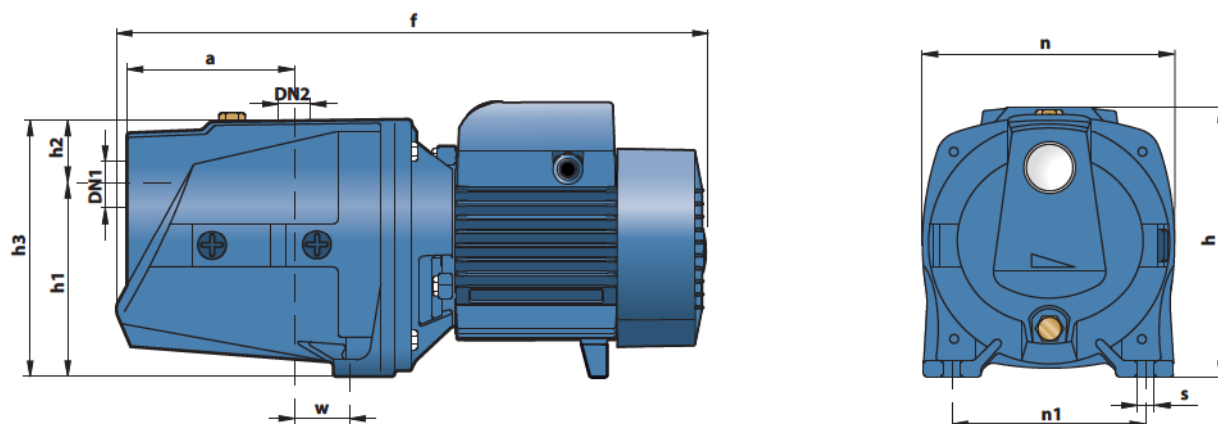
INSTALLATION EXAMPLE



POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	NOZZLE ASSEMBLY	Noryl GFN2V				
4	IMPELLER	Brass				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	<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>
		AR-14	Ø 14 mm	Ceramic	Graphite	NBR
7	BEARINGS	6203 ZZ / 6203 ZZ				
8	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>			
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>	
		JSWm 10H-M	20 µF 450 VL	60 µF 300 VL		
		JSWm 12H-M	25 µF 450 VL	60 µF 300 VL		
		JSWm 15H-M	25 µF 450 VL	60 µF 300 VL		
9	ELECTRIC MOTOR	JSWm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. JSW: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	w	s	1~	3~
JSWm 10H	JSW 10H	1"	1"	113.5	402	201	147	35	182	180	142	22	10	13.7	13.8
JSWm 12H	JSW 12H													14.7	13.6
JSWm 15H	JSW 15H													15.1	14.8
JSWm 10M	JSW 10M													13.7	13.8
JSWm 12M	JSW 12M													14.7	13.6
JSWm 15M	JSW 15M													15.1	14.8

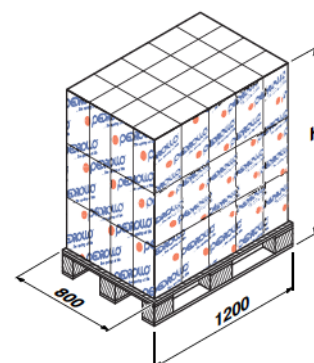
ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
JSWm 10H	4.7 A	4.5 A	9.4 A
JSWm 12H	5.4 A	5.0 A	10.8 A
JSWm 15H	6.6 A	6.0 A	13.2 A
JSWm 10M	5.0 A	4.6 A	10.0 A
JSWm 12M	5.7 A	5.2 A	11.4 A
JSWm 15M	6.6 A	6.0 A	13.2 A

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
JSW 10H	3.5 A	2.0 A	1.2 A	3.4 A	2.0 A	1.2 A
JSW 12H	4.2 A	2.4 A	1.4 A	4.0 A	2.3 A	1.3 A
JSW 15H	5.5 A	3.2 A	1.8 A	5.3 A	3.1 A	1.8 A
JSW 10M	3.6 A	2.1 A	1.2 A	3.5 A	2.0 A	1.2 A
JSW 12M	4.5 A	2.6 A	1.5 A	4.3 A	2.5 A	1.4 A
JSW 15M	5.5 A	3.2 A	1.8 A	5.3 A	3.1 A	1.8 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
		n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
JSWm 10H	JSW 10H	72	1460	1000	1010	96	1900	1330	1340
JSWm 12H	JSW 12H	72	1460	1080	1000	96	1900	1430	1330
JSWm 15H	JSW 15H	72	1460	1110	1090	96	1900	1470	1440
JSWm 10M	JSW 10M	72	1460	1000	1010	96	1900	1330	1340
JSWm 12M	JSW 12M	72	1460	1080	1000	96	1900	1430	1330
JSWm 15M	JSW 15M	72	1460	1110	1090	96	1900	1470	1440





PERFORMANCE RANGE

- Flow rate up to **160 l/min** (9.6 m³/h)
- Head up to **96 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °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



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. The self-priming JSW pumps are designed to pump water even in cases where air is present. As a result of their reliability and the fact that they are easy to use, they are recommended for use in domestic, civil and industrial applications such as the distribution of water in combination with pressure sets, and for the irrigation of gardens and allotments, etc.

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

PATENTS - TRADE MARKS - MODELS

- Registered Italian model n° 72753

OPTIONALS AVAILABLE ON REQUEST

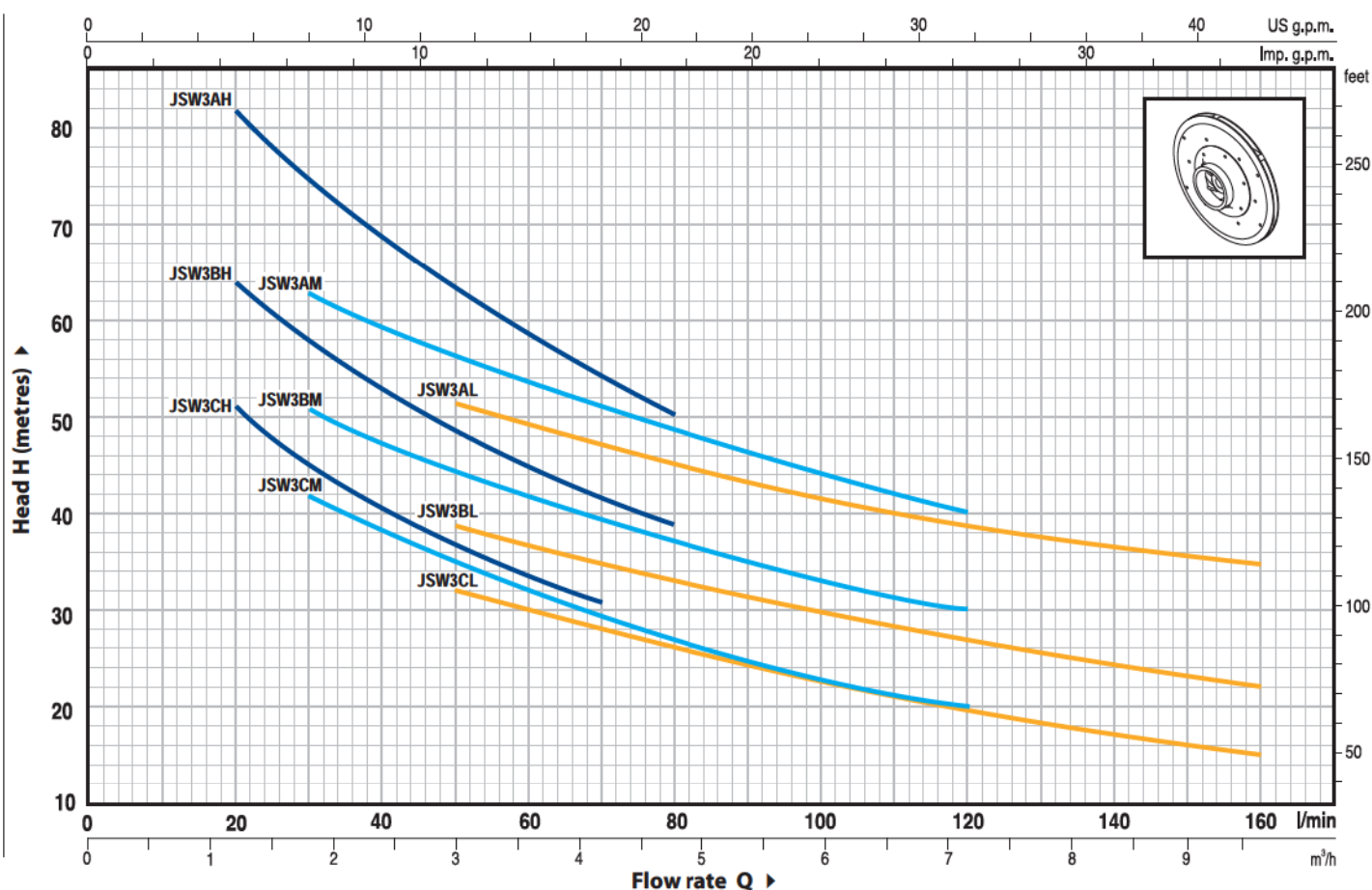
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

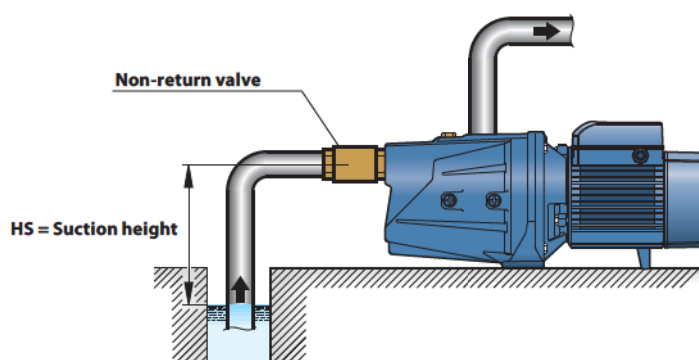


MODEL		POWER		Q	m³/h	0	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.6	4.2	4.8	6.0	7.2	8.4	9.6
Single-phase	Three-phase	kW	HP		l/min	0	10	15	20	25	30	35	40	45	50	60	70	80	100	120	140	160
JSWm 3CH	JSW 3CH	1.1	1.5	H metres	64	60	55	51	48	45	42.5	40	39	37	34	31						
JSWm 3BH	JSW 3BH	1.5	2		76	70	67	64	61	58	55.5	53	51	49	45	41	39					
–	JSW 3AH	2.2	3		96	90	86	82	79	75	71.5	69	66	64	58	54	50					
JSWm 3CM	JSW 3CM	1.1	1.5		52	50	48	45	44	42	40	38	37	35	32	29	27	23	20			
JSWm 3BM	JSW 3BM	1.5	2		60	58	56	54	52	51	49	47	46	45	42	39	37	33	30			
–	JSW 3AM	2.2	3		74	70	68	67	65	63	61	59	58	56	54	51	49	44	40			
JSWm 3CL	JSW 3CL	1.1	1.5		42	40	39	38	37	36	35	34	33	32	30	28	26	23	20	17	15	
JSWm 3BL	JSW 3BL	1.5	2		51	48	46	45	44	43	42	41	40	39	37	35	33	30	27	24	22	
–	JSW 3AL	2.2	3		62	60	58	57	56	55	54	53	52	51	49	47	45	42	39	36.5	35	

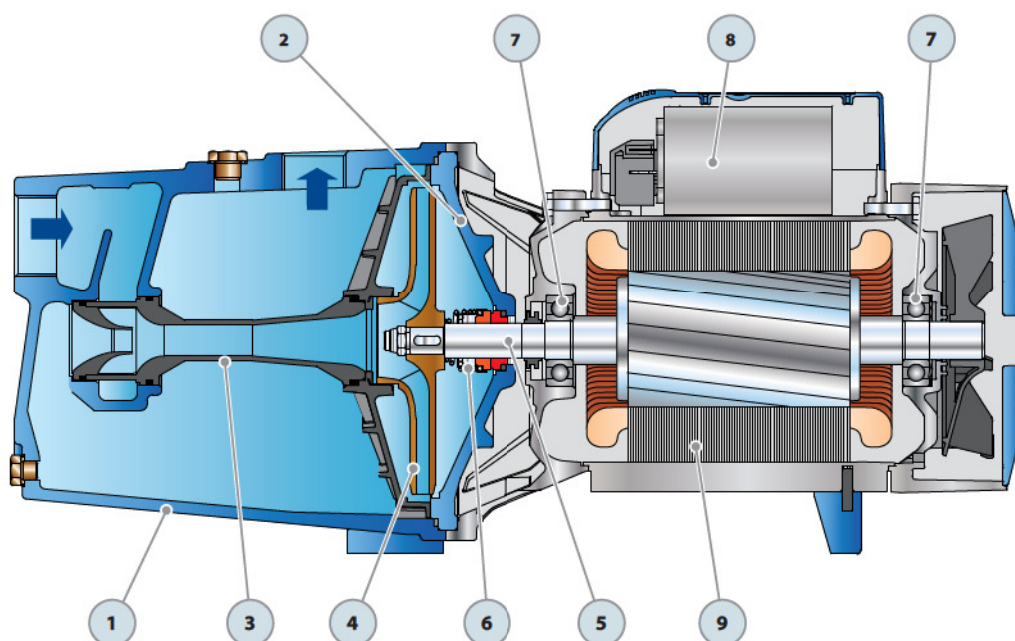
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

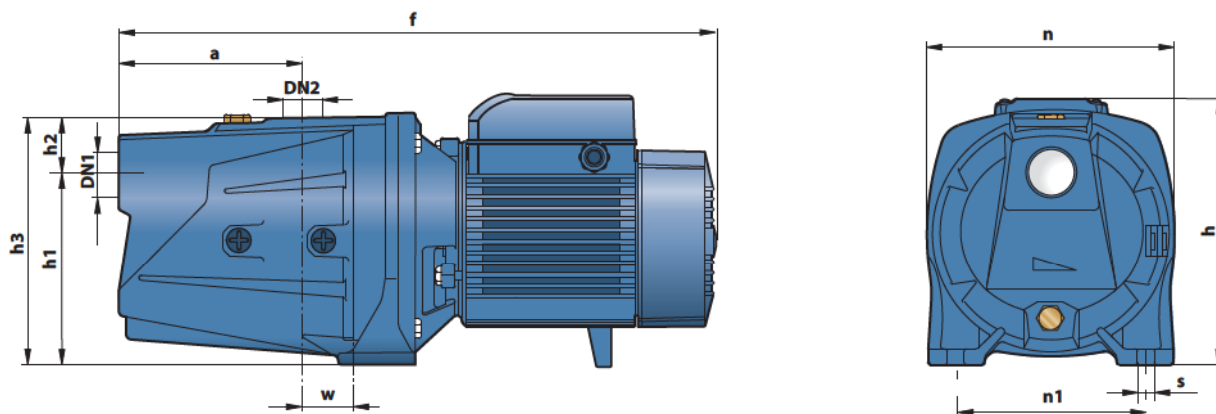
INSTALLATION EXAMPLE



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	NOZZLE ASSEMBLY	Noryl GFN2V				
4	IMPELLER	Brass				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		FN-18	Ø 18 mm	Graphite	Ceramic	NBR
7	BEARINGS	6204 ZZ / 6204 ZZ				
8	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)		(110 V)	
		JSWm 3C	31.5 µF 450 VL	60 µF 250 VL		
		JSWm 3B	45 µF 450 VL	80 µF 250 VL		
9	ELECTRIC MOTOR	JSWm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. JSW: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	w	s	1~	3~
JSWm 3CH	JSW 3CH	1½"	1"	155	530	242	165	43	208	206	164	30	11	24.9	22.9
JSWm 3BH	JSW 3BH													26.1	25.1
–	JSW 3AH													–	26.4
JSWm 3CM	JSW 3CM													24.9	22.9
JSWm 3BM	JSW 3BM													26.1	25.1
–	JSW 3AM													–	26.4
JSWm 3CL	JSW 3CL													24.9	22.9
JSWm 3BL	JSW 3BL													26.1	25.1
–	JSW 3AL													–	26.4

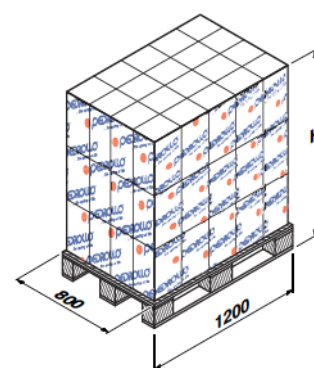
ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
JSWm 3CH	8.0 A	7.3 A	16.0 A
JSWm 3BH	9.0 A	8.2 A	18.0 A
JSWm 3CM	7.9 A	7.2 A	15.8 A
JSWm 3BM	9.3 A	8.5 A	18.6 A
JSWm 3CL	7.5 A	6.9 A	15.0 A
JSWm 3BL	9.7 A	9.0 A	19.4 A

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
JSW 3CH	5.5 A	3.2 A	1.8 A	5.3 A	3.1 A	1.8 A
JSW 3BH	6.9 A	4.0 A	2.3 A	6.6 A	3.8 A	2.2 A
JSW 3AH	9.0 A	5.2 A	3.0 A	8.6 A	5.0 A	2.9 A
JSW 3CM	5.9 A	3.4 A	2.0 A	5.7 A	3.3 A	1.9 A
JSW 3BM	7.3 A	4.2 A	2.4 A	7.0 A	4.0 A	2.3 A
JSW 3AM	9.5 A	5.5 A	3.2 A	9.1 A	5.3 A	3.1 A
JSW 3CL	5.5 A	3.2 A	1.8 A	5.3 A	3.1 A	1.8 A
JSW 3BL	7.3 A	4.2 A	2.4 A	7.0 A	4.0 A	2.3 A
JSW 3AL	9.0 A	5.2 A	3.0 A	8.6 A	5.0 A	2.9 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
JSWm 3CH	JSW 3CH	35	1420	890	820	49	1930	1240	1140
JSWm 3BH	JSW 3BH	35	1420	930	900	49	1930	1300	1250
–	JSW 3AH	35	1420	–	941	49	1930	–	1310
JSWm 3CM	JSW 3CM	35	1420	890	820	49	1930	1240	1140
JSWm 3BM	JSW 3BM	35	1420	930	900	49	1930	1300	1250
–	JSW 3AM	35	1420	–	941	49	1930	–	1310
JSWm 3CL	JSW 3CL	35	1420	890	820	49	1930	1240	1140
JSWm 3BL	JSW 3BL	35	1420	930	900	49	1930	1300	1250
–	JSW 3AL	35	1420	–	941	49	1930	–	1310





PERFORMANCE RANGE

- Flow rate up to **80 l/min** (4.8 m³/h)
- Head up to **72 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6.5 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



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. The self-priming JCR pumps are designed to pump water even in cases where air is present. As a result of their reliability and the fact that they are easy to use, they are recommended for use in domestic applications such as the distribution of water in combination with small or medium sized pressure sets, and for the irrigation of gardens and allotments, etc.

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

PATENTS - TRADE MARKS - MODELS

- European Patent n° 1 510 696

OPTIONALS AVAILABLE ON REQUEST

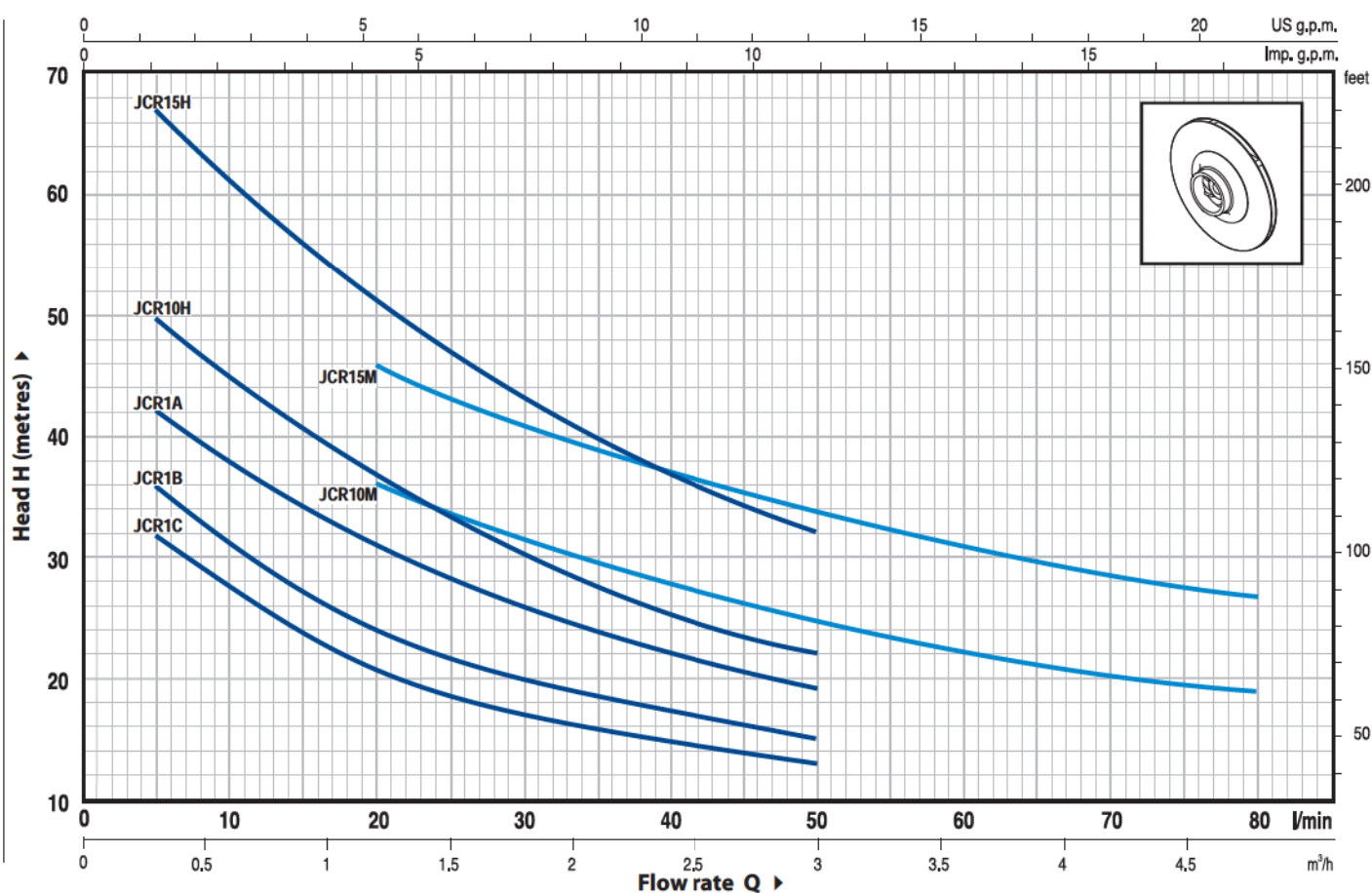
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

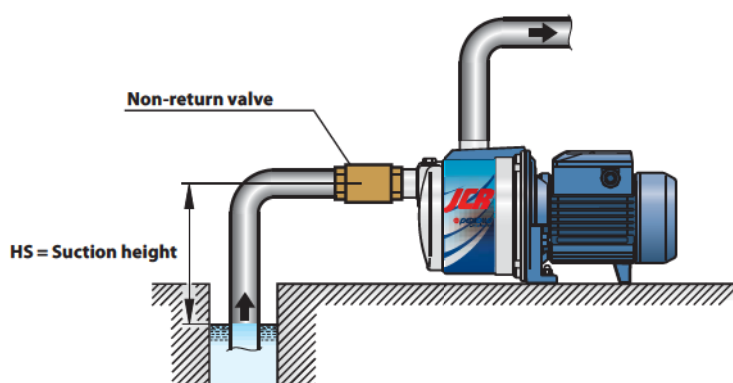


MODEL		POWER		Q	m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	4.2	4.8
Single-phase	Three-phase	kW	HP		l/min	0	5	10	15	20	25	30	35	40	50	60	70	80
JCRm 1C	–	0.37	0.50	H metres		35	32	27	24	21	19	17	16	15	13			
JCRm 1B	JCR 1B	0.50	0.70			41	36	31	27	24	22	20	19	17	15			
JCRm 1A	JCR 1A	0.60	0.85			47	42	38	34	31	28.5	26	24	22	19			
JCRm 10H	JCR 10H	0.75	1			56	50	45	41	37	33	30	27	25	22			
JCRm 15H	JCR 15H	1.1	1.5			72	67	61	56	51	47	43	40	37	32			
JCRm 10M	JCR 10M	0.75	1			46	44	41	39	37	35	32	30	28	25	22	21	19
JCRm 15M	JCR 15M	1.1	1.5			55	53	50	48	46	43	41	39	37	34	31	29	27

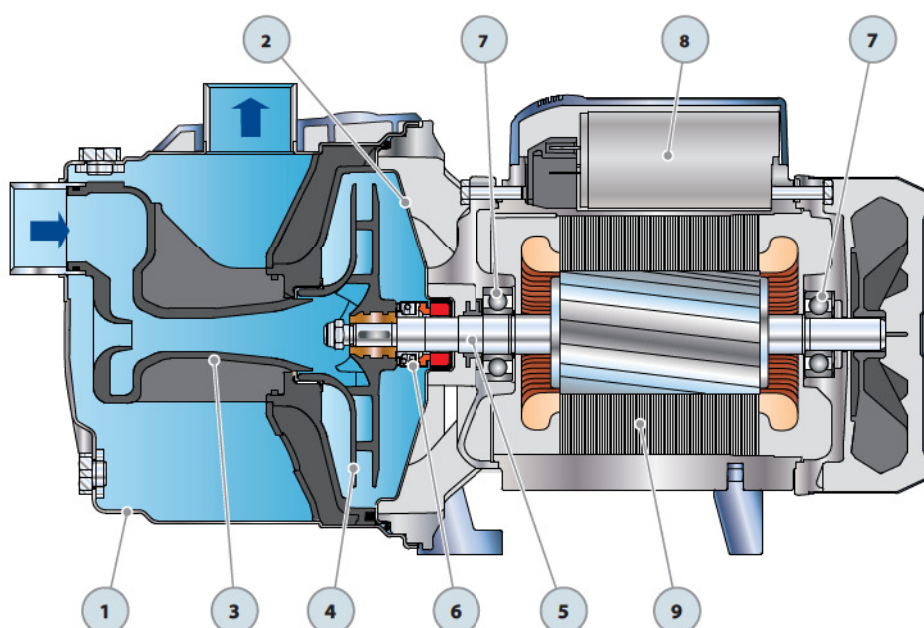
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

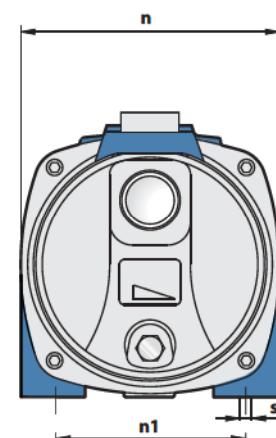
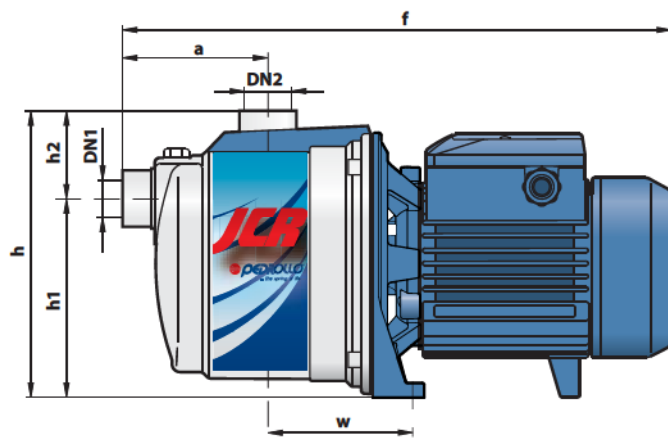
INSTALLATION EXAMPLE



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Stainless steel AISI 304, complete with threaded ports in compliance with ISO 228/1					
2	BODY BACKPLATE	Stainless steel AISI 304					
3	NOZZLE ASSEMBLY	Noryl GFN2V					
4	IMPELLER	Noryl GFN2V					
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104					
6	MECHANICAL SEAL	<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>
		JCR 1C-B-A	AR-12	Ø 12 mm	Ceramic	Graphite	NBR
		JCR 10-15	AR-14	Ø 14 mm	Ceramic	Graphite	NBR
7	BEARINGS	<i>Pump</i>	<i>Model</i>				
		JCR 1C-B-A	6201 ZZ / 6201 ZZ				
		JCR 10H-M / 15H-M	6203 ZZ / 6203 ZZ				
8	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>			
		JCRm 1C	10 µF 450 VL	25 µF 250 VL			
		JCRm 1B	10 µF 450 VL	30 µF 250 VL			
		JCRm 1A	14 µF 450 VL	30 µF 250 VL			
		JCRm 10H-M	20 µF 450 VL	60 µF 300 VL			
		JCRm 15H-M	25 µF 450 VL	60 µF 300 VL			
9	ELECTRIC MOTOR	JCRm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding.					
		JCR: three-phase 230/400 V - 50 Hz.					
		⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance					
		– Insulation: F class. – Protection: IP 44.					



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~
JCRm 1C	–	1"	1"	90	345	174	122	52	160	120	88	9	5.6	–
JCRm 1B	JCR 1B												6.4	6.3
JCRm 1A	JCR 1A												6.9	6.4
JCRm 10H-M	JCR 10H-M	1 1/4"	1"	117	406	206	145	55	184	135	110	10	9.4	9.3
JCRm 15H-M	JCR 15H-M												10.5	10.3

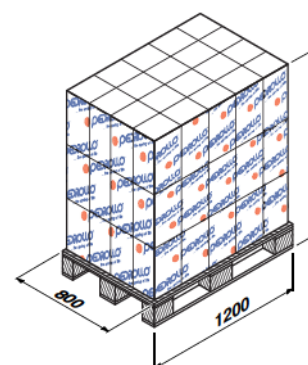
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
JCRm 1C	2.4 A	2.2 A	4.8 A
JCRm 1B	3.2 A	2.9 A	6.5 A
JCRm 1A	3.6 A	3.3 A	7.3 A
JCRm 10H	4.7 A	4.5 A	9.4 A
JCRm 15H	6.6 A	6.0 A	13.2 A
JCRm 10M	5.0 A	4.6 A	10.0 A
JCRm 15M	6.6 A	6.0 A	13.2 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
JCR 1B	2.1 A	1.2 A	0.7 A	2.0 A	1.2 A	0.7 A
JCR 1A	2.8 A	1.6 A	0.9 A	2.7 A	1.6 A	0.9 A
JCR 10H	3.5 A	2.0 A	1.2 A	3.4 A	2.0 A	1.2 A
JCR 15H	5.5 A	3.2 A	1.8 A	5.3 A	3.1 A	1.8 A
JCR 10M	3.6 A	2.1 A	1.2 A	3.5 A	2.0 A	1.2 A
JCR 15M	5.5 A	3.2 A	1.8 A	5.3 A	3.1 A	1.8 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg 1~	kg 3~	n° pumps	H (mm)	kg 1~	kg 3~
JCRm 1C	–	98	1440	570	–	154	2180	880	–
JCRm 1B	JCR 1B	98	1440	650	640	154	2180	1010	990
JCRm 1A	JCR 1A	98	1440	700	650	154	2180	1080	1010
JCRm 10H-M	JCR 10H-M	72	1460	700	690	96	1900	920	910
JCRm 15H-M	JCR 15H-M	72	1460	780	760	96	1900	1030	1010



PLURIJET 80-100

Self-priming multi-stage pumps



PERFORMANCE RANGE

- Flow rate up to **130 l/min** (7.8 m³/h)
- Head up to **50 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 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



INSTALLATION AND USE

Suitable for use with clean water even where air is present and with liquids that are not chemically aggressive towards the materials from which the pump is made.

The self-priming "PLURIJET" pumps are designed to pump water even in cases where air is present. As a result of their quietness, reliability and low energy consumption they are recommended for use in domestic and civil applications such as the pressurisation and distribution of water in combination with pressure sets, and in rain water recovery and irrigation systems, etc.

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

PATENTS - TRADE MARKS - MODELS

- PLURIJET® is a registered trade mark
- Registered Community Design n° 342159-0006

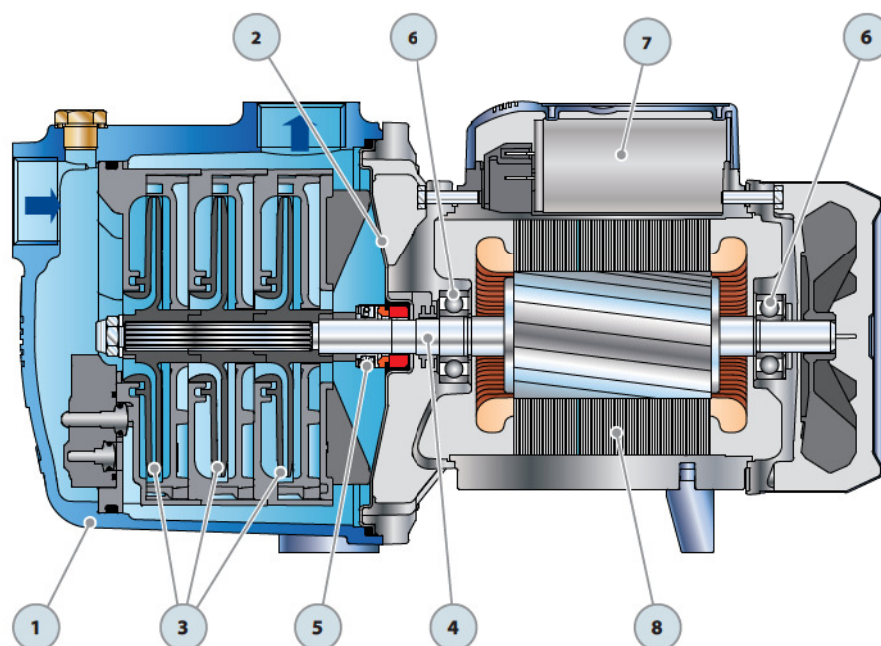
OPTIONALS AVAILABLE ON REQUEST

- Other voltages or 60 Hz frequency

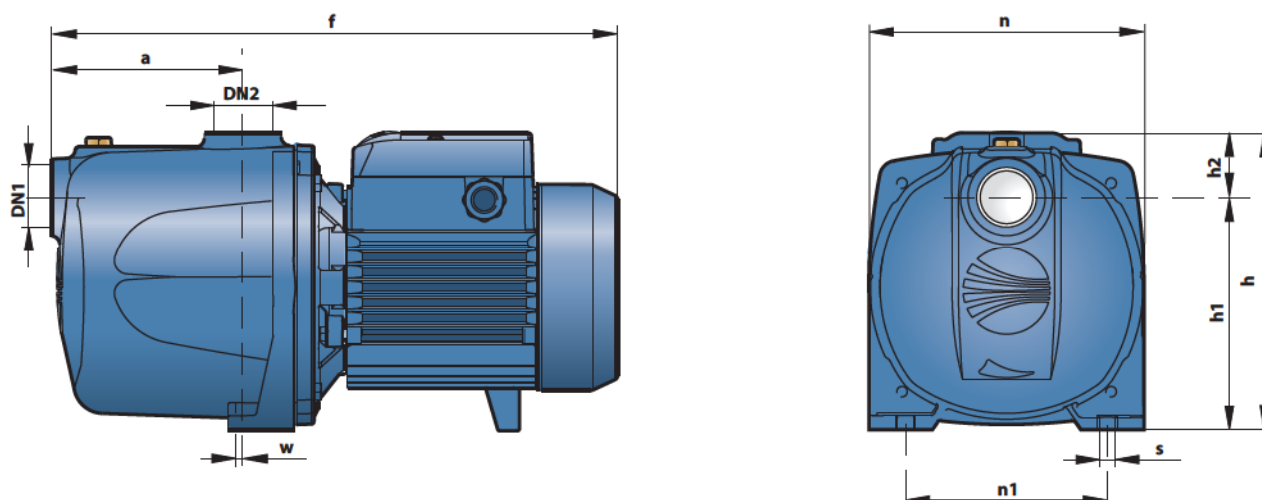
GUARANTEE

2 years subject to terms and conditions

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLERS	Noryl GFN2V				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		AR-13	Ø 13 mm	Ceramic	Graphite	NBR
6	BEARINGS	Pump	Model			
		PLURIJET 3/80				
		PLURIJET 3/100	6202 ZZ - C3 / 6201 ZZ			
		PLURIJET 4/80				
		PLURIJET 4/100	6203 ZZ / 6203 ZZ			
7	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)	(110 V)		
		PLURIJETm 3/80	12.5 µF 450 VL	30 µF 250 VL		
		PLURIJETm 4/80	14 µF 450 VL	30 µF 250 VL		
		PLURIJETm 3/100				
		PLURIJETm 4/100	20 µF 450 VL	60 µF 300 VL		
8	ELECTRIC MOTOR	PLURIJETm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PLURIJET: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
PLURIJETm 3/80	–	1"	1"	110	334	172	134	38	158	116	2	9	10.0	–
PLURIJETm 4/80	PLURIJET 4/80			135	357								11.3	10.7
PLURIJETm 3/100	PLURIJET 3/100			110	334								10.5	10.0
PLURIJETm 4/100	PLURIJET 4/100			135	378	191		61					13.7	12.7

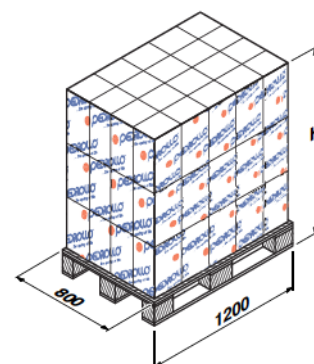
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PLURIJETm 3/80	3.4 A	3.3 A	6.8 A
PLURIJETm 4/80	4.3 A	4.2 A	8.6 A
PLURIJETm 3/100	4.1 A	4.0 A	8.2 A
PLURIJETm 4/100	6.0 A	5.8 A	12.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
PLURIJET 4/80	3.4 A	2.0 A	1.1 A	3.3 A	1.9 A	1.1 A
PLURIJET 3/100	3.1 A	1.8 A	1.0 A	3.0 A	1.7 A	1.0 A
PLURIJET 4/100	4.5 A	2.6 A	1.5 A	4.3 A	2.5 A	1.4 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	1~	3~	n° pumps	H (mm)	1~	3~
PLURIJETm 3/80	–	98	1440	980	–	154	2180	1560	–
PLURIJETm 4/80	PLURIJET 4/80	98	1440	1130	1070	154	2180	1760	1670
PLURIJETm 3/100	PLURIJET 3/100	98	1440	1050	1000	154	2180	1640	1560
PLURIJETm 4/100	PLURIJET 4/100	98	1540	1360	1260	140	2140	1940	1800



PLURIJET 90-130-200

Self-priming multi-stage pumps



PERFORMANCE RANGE

- Flow rate up to **200 l/min** (12 m³/h)
- Head up to **97 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+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



CERTIFICATIONS



AN30



INSTALLATION AND USE

Suitable for use with clean water even where air is present and with liquids that are not chemically aggressive towards the materials from which the pump is made.

The self-priming "PLURIJET" pumps are designed to pump water even in cases where air is present. As a result of their quietness, reliability and low energy consumption they are recommended for use in domestic and civil applications such as the pressurisation and distribution of water in combination with pressure sets, and in rain water recovery and irrigation systems, etc.

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

PATENTS - TRADE MARKS - MODELS

- PLURIJET® is a registered trade mark
- Registered Community Design n° 342159-0007

OPTIONALS AVAILABLE ON REQUEST

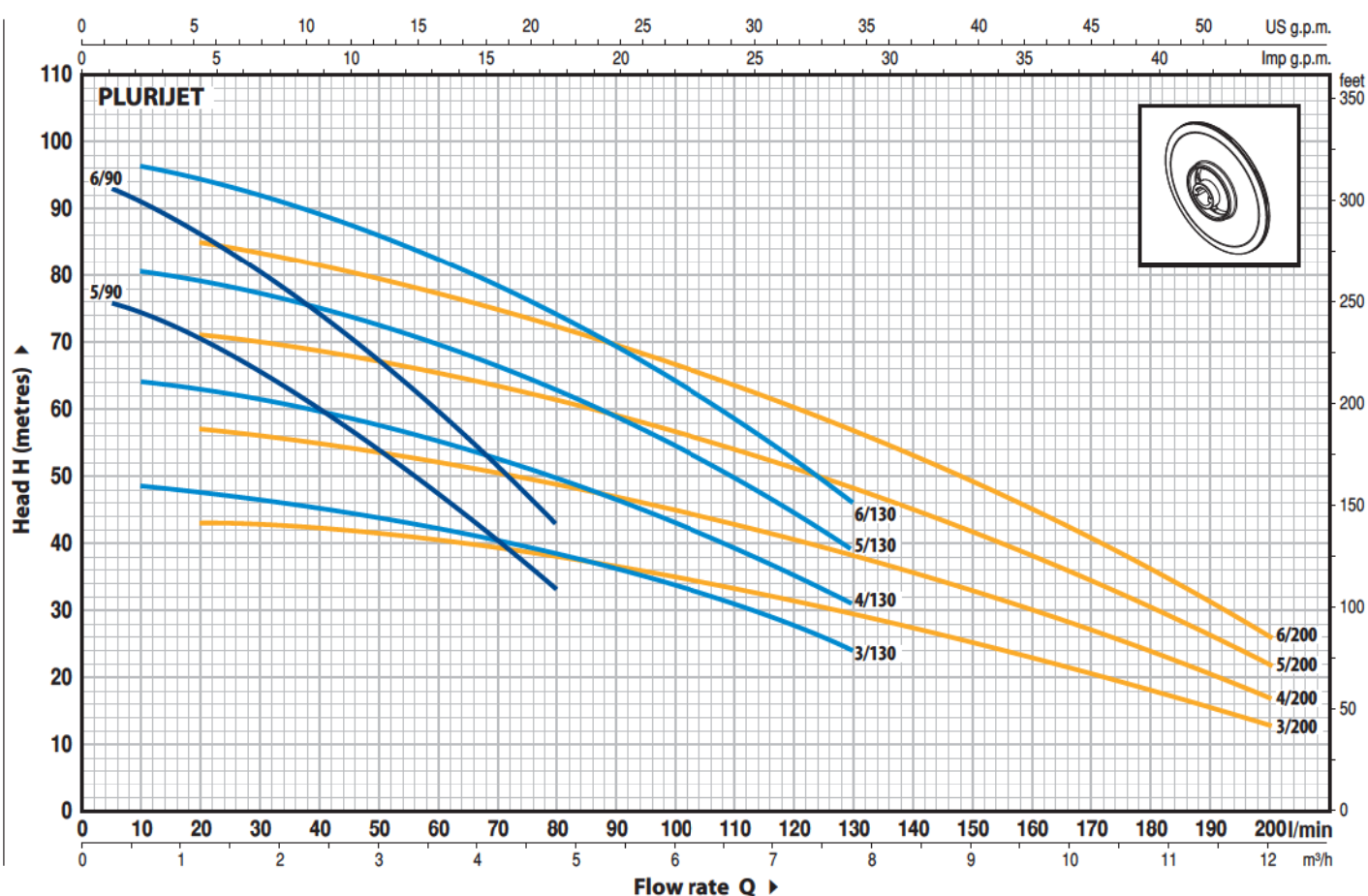
- Other voltages or 60 Hz frequency
- IP55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

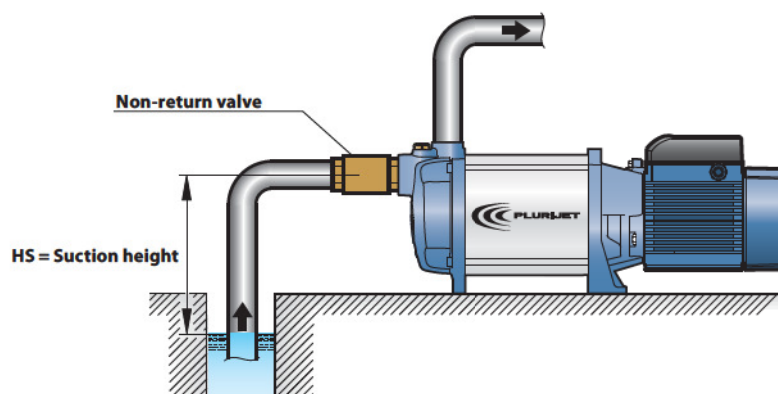


MODEL		POWER		Q														
Single-phase	Three-phase	kW	HP		m³/h	0	0.3	0.6	1.2	2.4	3.6	4.8	6.0	7.8	8.4	9.6	10.8	12.0
PLURIJETm 5/90	PLURIJET 5/90	1.1	1.5	H metres	l/min	0	5	10	20	40	60	80	100	130	140	160	180	200
PLURIJETm 6/90	PLURIJET 6/90	1.5	2			76	76	73.5	70	60.5	47	33						
PLURIJETm 3/130	PLURIJET 3/130	1.1	1.5			93	93	90.5	86	74.5	59.5	43						
PLURIJETm 4/130	PLURIJET 4/130	1.5	2			49	49	48.5	47.5	45	42.5	38.5	33.5	24				
-	PLURIJET 5/130	1.8	2.5			65	65	64	63	60	56	50	43	31				
-	PLURIJET 6/130	2.2	3			81	81	80.5	79	75	70	62.5	54	39				
PLURIJETm 3/200	PLURIJET 3/200	1.1	1.5			97	97	96.5	94.5	90	83	74.5	64	46				
PLURIJETm 4/200	PLURIJET 4/200	1.5	2			44	43.5	43.5	43	42	40.5	38	35	29	27.5	23	18	13
-	PLURIJET 5/200	1.8	2.5			58	57.5	57.5	57	55	52.5	49.5	45	38	35.5	30	24	17
-	PLURIJET 6/200	2.2	3			73	72	71.5	71	69	65.5	62	56.5	48	44.5	38	30	22
						87	86	85.5	85	82	78	73	67	57	53	45	36	26

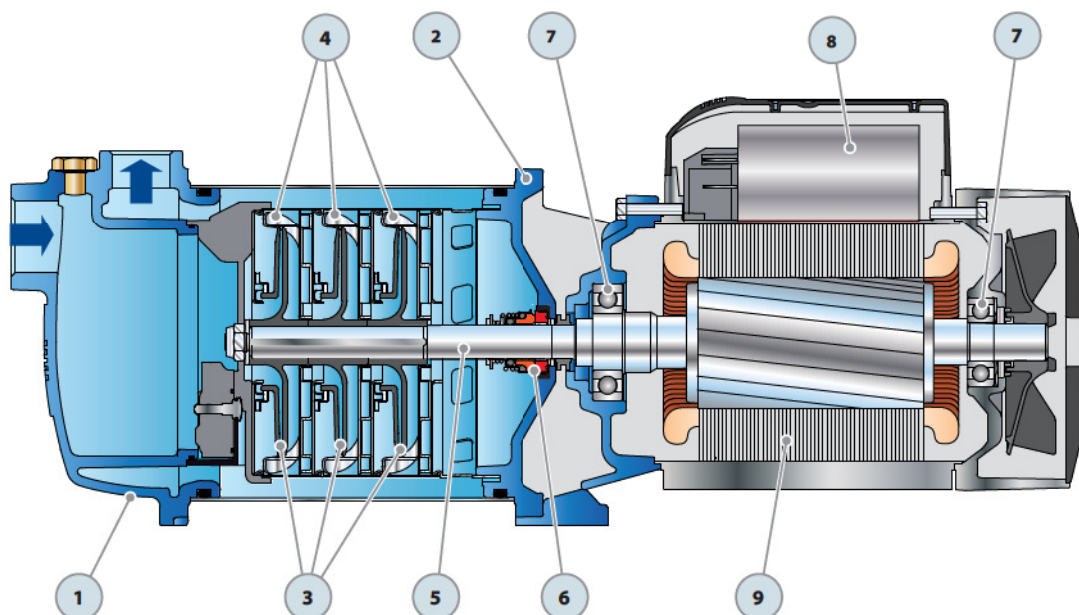
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

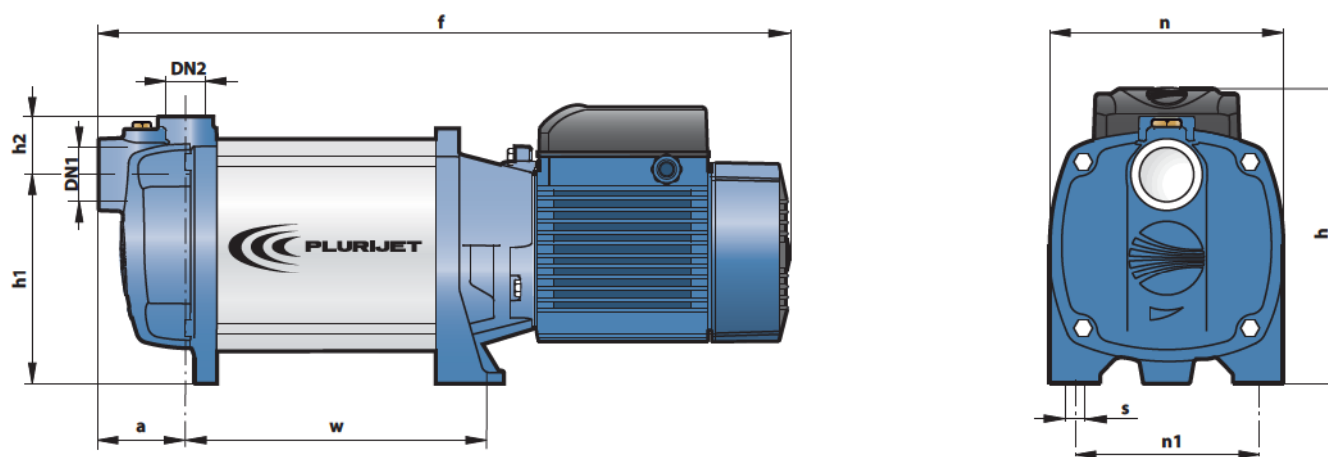
INSTALLATION EXAMPLE



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron and stainless steel AISI 304, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Cast iron				
3	IMPELLERS	Noryl GFN2V				
4	DIFFUSERS	Stainless steel AISI 304, complete with anti-wear ring				
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
6	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		FN-18	Ø 18 mm	Graphite	Ceramic	NBR
7	BEARINGS	6206 ZZ - C3 / 6204 ZZ				
8	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)	(110 V)		
		PLURIJETm 5/90	31.5 µF 450 VL	60 µF 250 VL		
		PLURIJETm 3/130				
		PLURIJETm 3/200				
		PLURIJETm 6/90	45 µF 450 VL	80 µF 250 VL		
		PLURIJETm 4/130				
PLURIJETm 4/200						
9	ELECTRIC MOTOR	PLURIJETm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PLURIJET: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
PLURIJETm 5/90	PLURIJET 5/90	1 1/4"	1"	69	634	230	153	46	185	145	304	10	26.6	24.8
PLURIJETm 6/90	PLURIJET 6/90				665						335		28.7	27.8
PLURIJETm 3/130	PLURIJET 3/130				571						241		24.8	22.9
PLURIJETm 4/130	PLURIJET 4/130				602						272		26.9	25.9
-	PLURIJET 5/130				634						304		-	27.9
-	PLURIJET 6/130				665						335		-	28.8
PLURIJETm 3/200	PLURIJET 3/200				571						241		24.8	22.9
PLURIJETm 4/200	PLURIJET 4/200				602						272		26.9	25.9
-	PLURIJET 5/200				634						304		-	27.9
-	PLURIJET 6/200				665						335		-	28.8

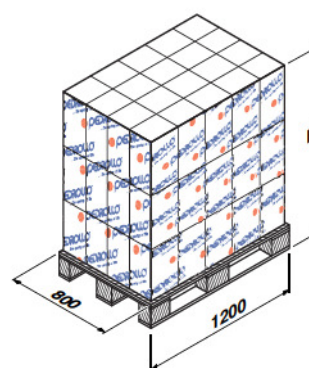
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PLURIJETm 5/90	8.5 A	8.2 A	17.0 A
PLURIJETm 6/90	10.5 A	10.0 A	21.0 A
PLURIJETm 3/130	8.5 A	8.2 A	17.0 A
PLURIJETm 4/130	10.5 A	10.0 A	21.0 A
PLURIJETm 3/200	8.5 A	8.2 A	17.0 A
PLURIJETm 4/200	10.5 A	10.0 A	21.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
PLURIJET 5/90	5.7 A	3.3 A	1.9 A	5.5 A	3.2 A	1.8 A
PLURIJET 6/90	8.1 A	4.7 A	2.7 A	7.8 A	4.5 A	2.6 A
PLURIJET 3/130	5.7 A	3.3 A	1.9 A	5.5 A	3.2 A	1.8 A
PLURIJET 4/130	8.5 A	4.9 A	2.8 A	8.1 A	4.7 A	2.7 A
PLURIJET 5/130	8.7 A	5.0 A	2.9 A	8.3 A	4.8 A	2.8 A
PLURIJET 6/130	10.4 A	6.0 A	3.5 A	10.0 A	5.8 A	3.4 A
PLURIJET 3/200	5.7 A	3.3 A	1.9 A	5.5 A	3.2 A	1.8 A
PLURIJET 4/200	8.1 A	4.7 A	2.7 A	7.8 A	4.5 A	2.6 A
PLURIJET 5/200	8.7 A	5.0 A	2.9 A	8.3 A	4.8 A	2.8 A
PLURIJET 6/200	10.4 A	6.0 A	3.5 A	10.0 A	5.8 A	3.4 A

PALLETIZATION

MODEL		GROUPAGE / CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	
				1~	3~
PLURIJETm 5/90	PLURIJET 5/90	30	1430	820	760
PLURIJETm 6/90	PLURIJET 6/90	30	1430	880	850
PLURIJETm 3/130	PLURIJET 3/130	40	1430	1010	940
PLURIJETm 4/130	PLURIJET 4/130	40	1430	1100	1060
-	PLURIJET 5/130	30	1430	-	860
-	PLURIJET 6/130	30	1430	-	880
PLURIJETm 3/200	PLURIJET 3/200	40	1430	1010	940
PLURIJETm 4/200	PLURIJET 4/200	40	1430	1100	1060
-	PLURIJET 5/200	30	1430	-	860
-	PLURIJET 6/200	30	1430	-	880



MULTISPEED

Self-priming pump with inverter



PERFORMANCE RANGE

The working pressure can be set at four different values: 1.5 / 2.5 / 3.0 / 3.3 bar.

Pressure selected	Flow rate available
3.3 bar	0 ÷ 45 l/min
3.0 bar	0 ÷ 50 l/min
2.5 bar	0 ÷ 60 l/min
1.5 bar	0 ÷ 75 l/min

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

Complete with **1.5 m** long power cable

EN 60335-1
IEC 60335-1
CEI 61-150

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use with clean water even where air is present and with liquids that are not chemically aggressive towards the materials from which the pump is made.

Under normal working conditions a pump may be required to supply water at various flow rates which also results in variations in the pressure. The MULTISPEED pump automatically varies the rotational speed of the motor according to the required flow rate thereby giving constant pressure and low energy consumption. As a result, the annoying sudden change in pressure that normally occurs when extra taps are opened is eliminated and energy consumption may be reduced by up to 25%. Variable speed operation also reduces the level of noise and the vibration produced by the pump when compared with traditional solutions. The unit also incorporates built in protection that stops the pump if its water supply runs dry.

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

PATENTS - TRADE MARKS - MODELS

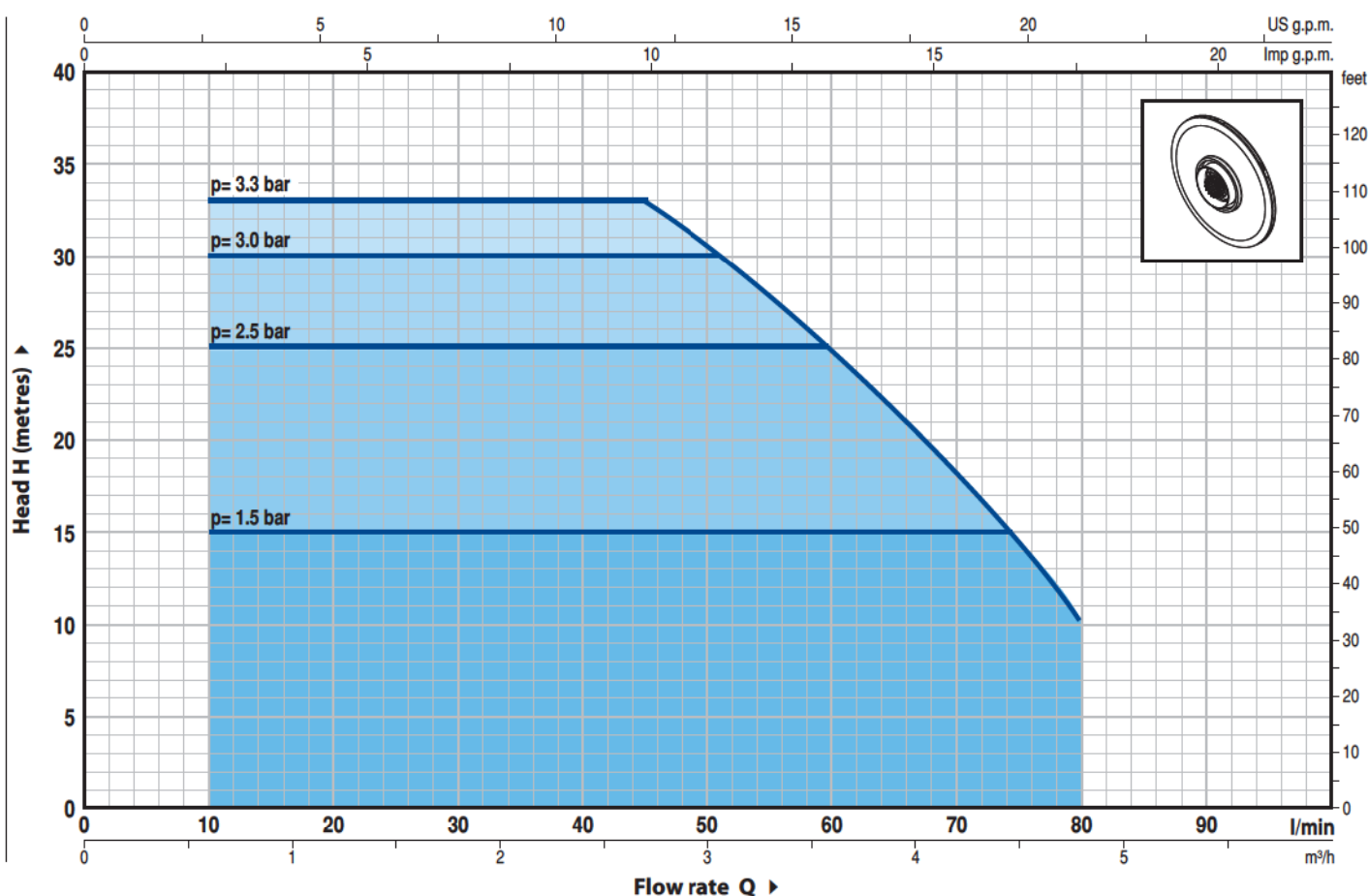
- MULTISPEED® is a registered trade mark.

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50/60 Hz HS= 0 m

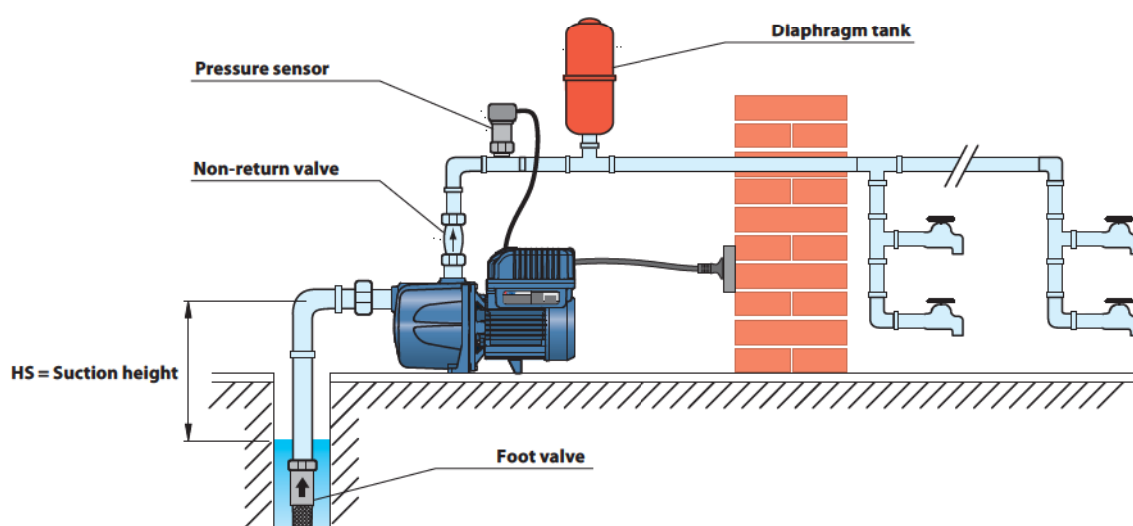


MODEL	POWER		p	Q	m³/h	0	0.6	2.7	3.0	3.6	4.5	4.8
Single-phase	kW	HP	Setting Pressure		l/min	0	10	45	50	60	75	80
MULTISPEED 3/80	0.45	0.60	1.5 bar	H metres	15	15	15	15	15	15	15	10
			2.5 bar		25	25	25	25	25	15	10	
			3.0 bar		30	30	30	30	25	15	10	
			3.3. bar		33	33	33	30	25	15	10	

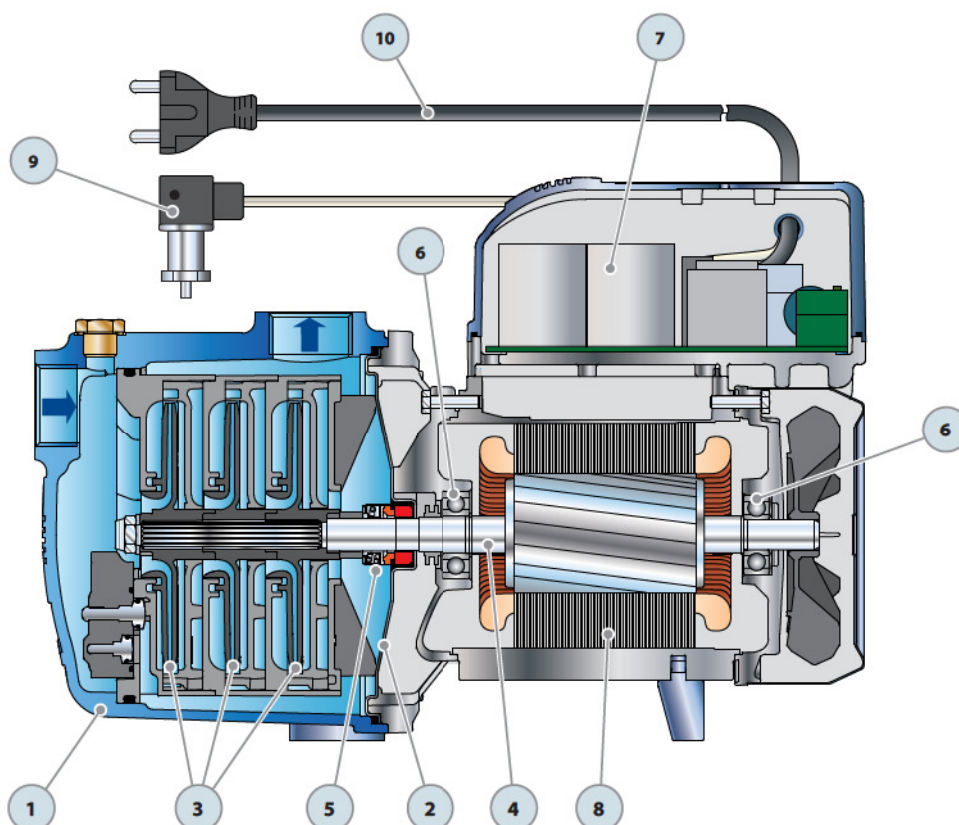
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

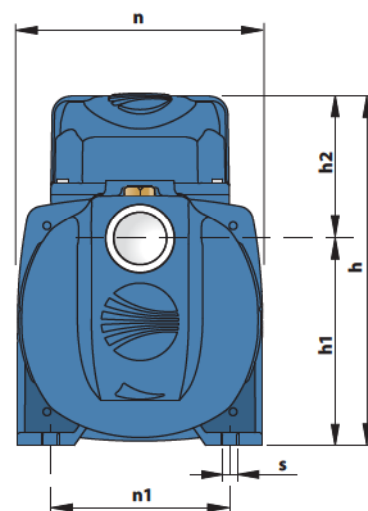
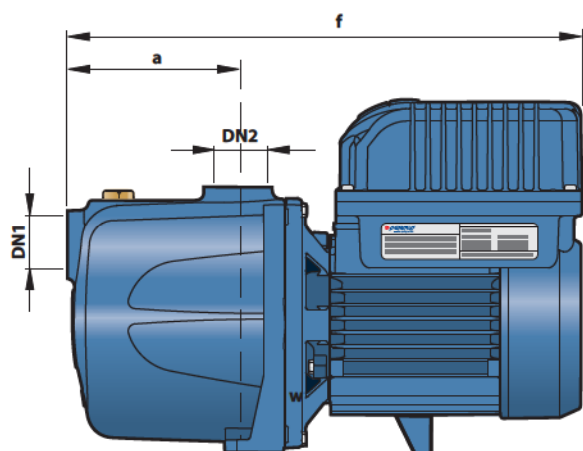
INSTALLATION EXAMPLE



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLERS	Noryl GFN2V				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	<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>
		AR-13	Ø 13 mm	Ceramic	Graphite	NBR
6	BEARINGS	6202 ZZ - C3 / 6201 ZZ				
7	INVERTER					
8	ELECTRIC MOTOR	MULTISPEED: single-phase 230 V - 50/60 Hz. – Insulation: F class. – Protection: IP 44.				
9	PRESSURE SENSOR	Complete with 1.5 metre long cable				
10	POWER CABLE	1.5 metre long "H07 RN-F" cable with Schuko plug				



DIMENSIONS AND WEIGHT



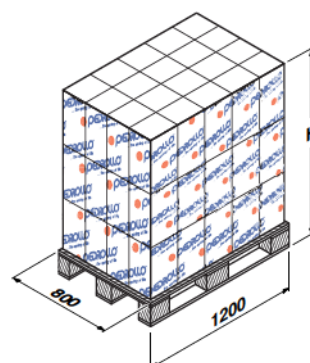
MODEL	PORTS		DIMENSIONS mm									kg
	DN1	DN2	a	f	h	h1	h2	n	n1	w	s	
Single-phase												1~
MULTISPEED 3/80	1"	1"	110	339	225	134	91	158	116	2	9	12.3

ABSORPTION

MODEL	VOLTAGE (single-phase)
Single-phase	230 V
MULTISPEED 3/80	7.0 A

PALLETIZATION

MODEL	GROUPAGE / CONTAINER		
	n° pumps	H (mm)	kg
Single-phase			1~
MULTISPEED 3/80	48	1180	610





PERFORMANCE RANGE

- Flow rate up to **50 l/min** (3 m³/h)
- Head up to **51 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+90 °C**
- Temperature of diesel up to **+55 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 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



INSTALLATION AND USE

Suitable for use with diesel, clean water that does not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

As a specific result of the pump's operating principle they are suitable for use in all situations where a compact self-priming pump is required or where the fluid supply is limited, irregular or contains air.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605
- CK 80/90 Registered Community Design n° 342159-0008

OPTIONALS AVAILABLE ON REQUEST

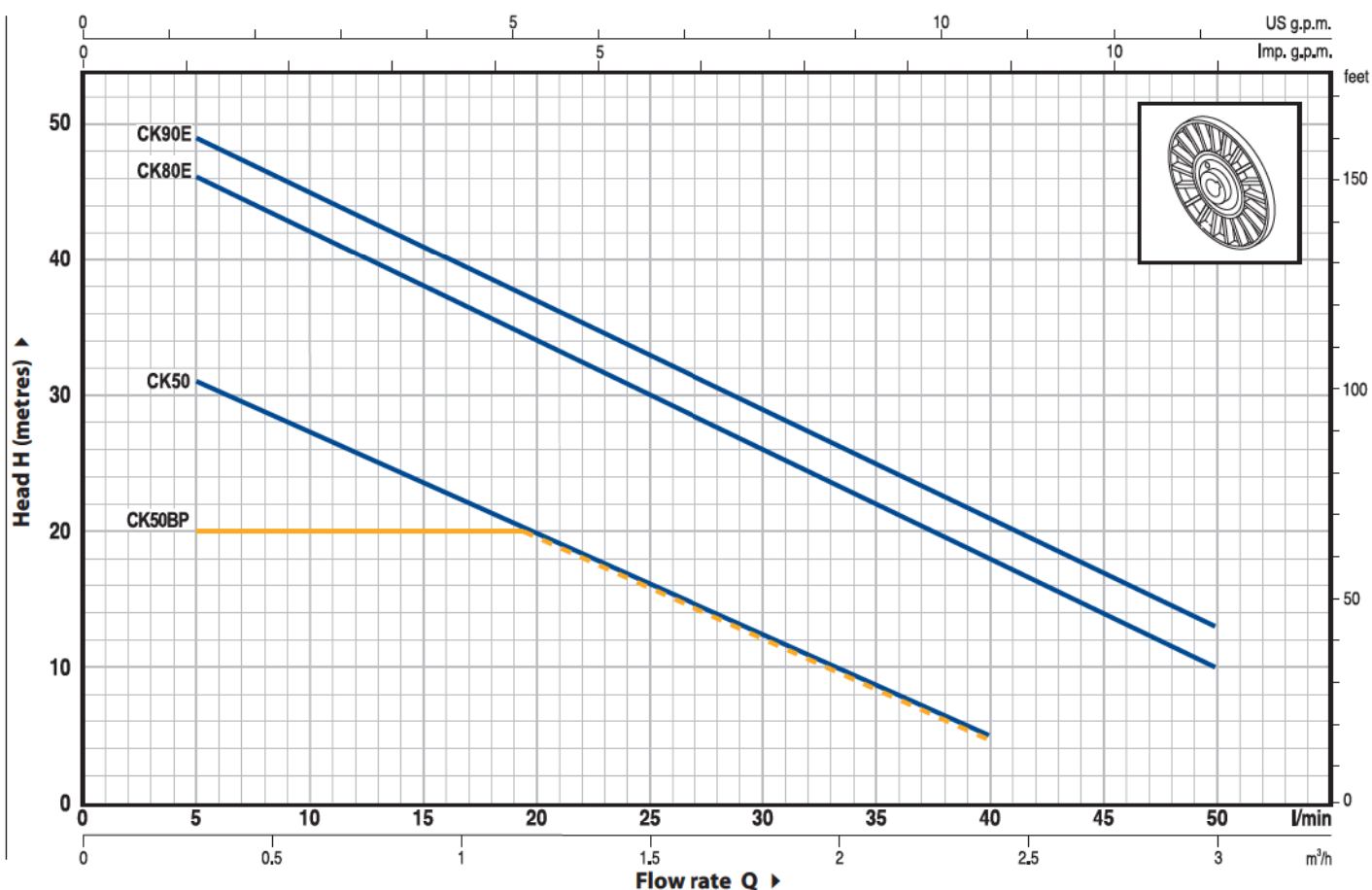
- **CK-INT** pump with switch and power cable complete with Schuko plug
- **CKm 50-BP/NZ** pump with aluminium trigger dispensing nozzle and 4 metre long spiral reinforced hose.
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP 55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



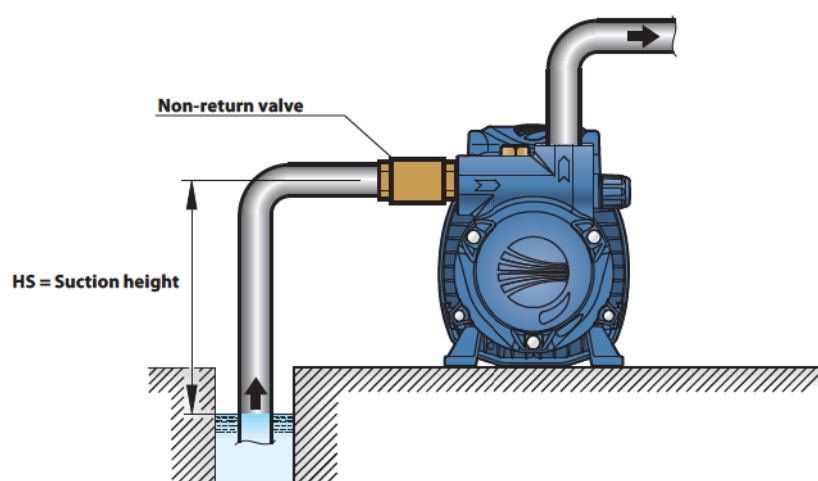
MODEL		POWER		Q													
Single-phase	Three-phase	kW	HP		m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0		
CKm 50	CK 50	0.37	0.50	H metres	l/min	0	5	10	15	20	25	30	35	40	50		
CKm 50-BP	CK 50-BP	0.25	0.33			35	31	27	24	20	16	13	9	5			
CKm 80E	CK 80E	0.55	0.75			20	20	20	20	20	16.5	13	9	5			
CKm 90E	CK 90E	0.75	1			48	46	42	38	34	30	26	22	18	10		
						51	49	45	41	37	33	29	25	21	13		

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

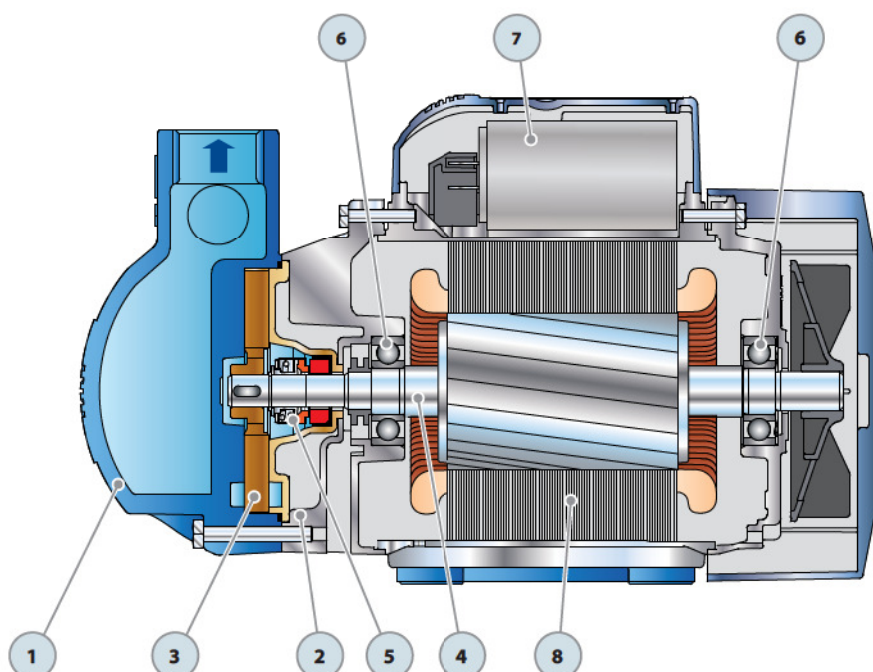
Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CK 50-BP = pump with integral by-pass

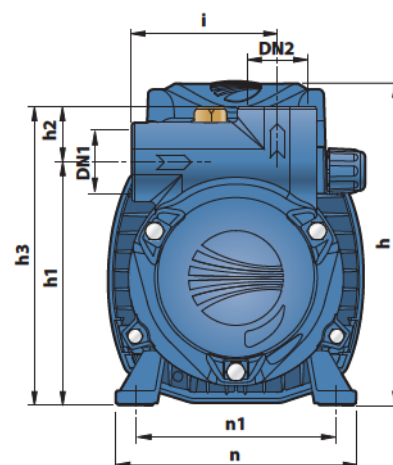
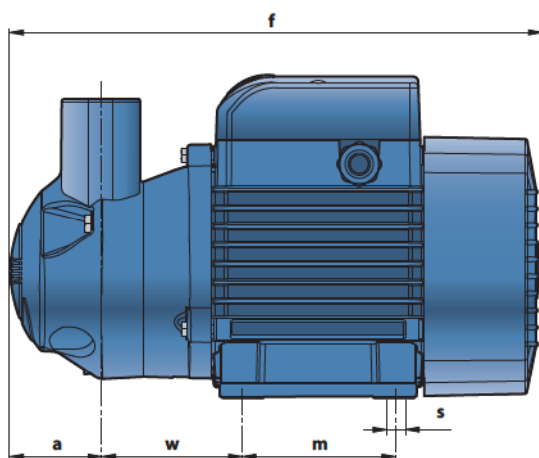
INSTALLATION EXAMPLE



POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, complete 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, star type with open radial vanes				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		AR-12V	Ø 12 mm	Ceramic	Graphite	Viton
6	BEARINGS	Pump	Model			
		CK 50	6201 ZZ / 6201 ZZ			
		CK 50-BP				
		CK 80	6203 ZZ / 6203 ZZ			
7	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)	(110 V)		
		CKm 50	12.5 µF 450 VL	30 µF 250 VL		
		CKm 50-BP				
		CKm 80E	16 µF 450 VL	60 µF 300 VL		
		CKm 90E	20 µF 450 VL	60 µF 300 VL		
8	ELECTRIC MOTOR	CKm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. CK: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
CKm 50	CK 50	¾"	¾"	41	260	159	128	25	153	75	80	120	100	69	7	7.4	6.8
CKm 50-BP	CK 50-BP			44	263											10.8	9.9
CKm 80E	CK 80E	1"	1"	50	296	180	136	31	167	81	90	140	112	77		10.9	10.0
CKm 90E	CK 90E															10.9	10.0

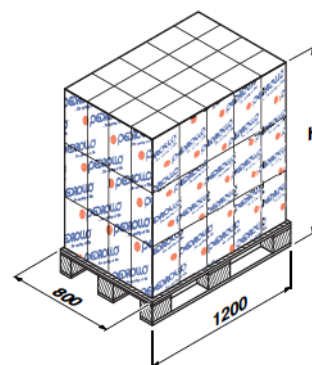
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
CKm 50	3.0 A	2.9 A	6.2 A
CKm 50-BP	3.0 A	2.9 A	6.2 A
CKm 80E	5.0 A	4.8 A	9.8 A
CKm 90E	4.8 A	4.4 A	9.4 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
CK 50	2.1 A	1.2 A	0.7 A	2.0 A	1.2 A	0.7 A
CK 50-BP	2.1 A	1.2 A	0.7 A	2.0 A	1.2 A	0.7 A
CK 80E	3.5 A	2.0 A	1.2 A	3.4 A	2.0 A	1.2 A
CK 90E	3.5 A	2.0 A	1.2 A	3.4 A	2.0 A	1.2 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
CKm 50	CK 50	120	1280	910	840	180	1850	1350	1240
CKm 50-BP	CK 50-BP	120	1280	910	840	180	1850	1350	1240
CKm 80E	CK 80E	102	1370	1120	1030	136	1780	1490	1370
CKm 90E	CK 90E	102	1370	1130	1040	136	1780	1500	1380



Self-priming liquid ring pumps

with double anti-seize inserts



PERFORMANCE RANGE

- Flow rate up to **50 l/min** (3 m³/h)
- Head up to **51 m**

APPLICATION LIMITS

- Manometric suction lift up to **9 m** (HS)
- Liquid temperature between **-10 °C** and **+90 °C**
- Temperature of diesel up to **+55 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **6 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



INSTALLATION AND USE

Suitable for use with clean water or liquids that do not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

As a specific result of the pump's operating principle they are suitable for use in all situations where a compact self-priming pump is required or where the fluid supply is limited, irregular or contains air.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605
- Registered Community Design n° 342159-0008

OPTIONALS AVAILABLE ON REQUEST

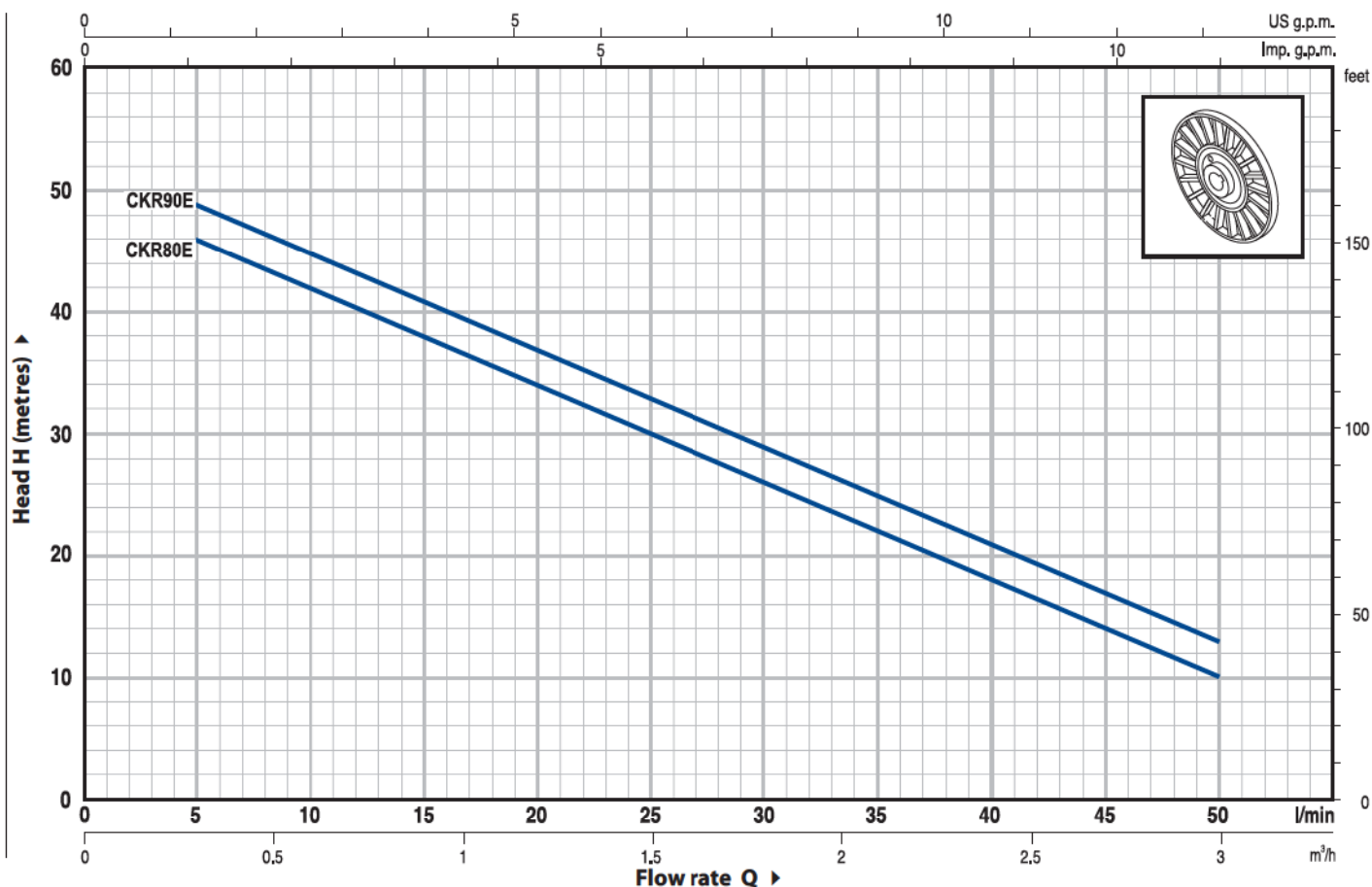
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP 55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

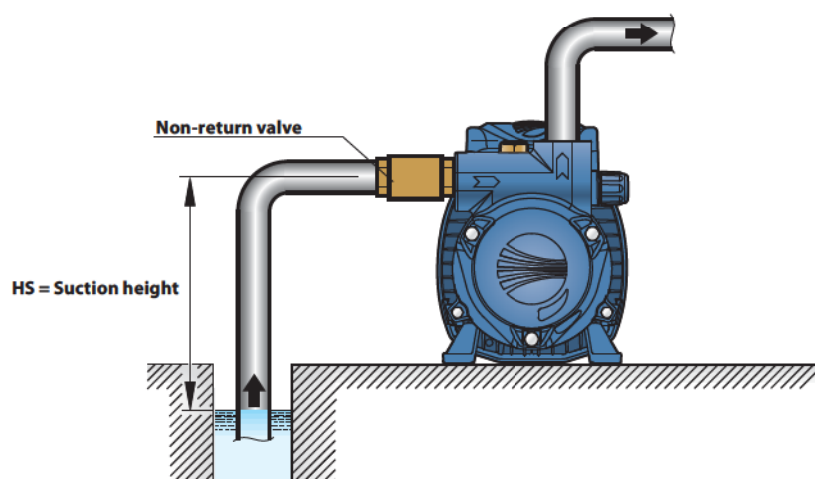


MODEL		POWER		Q	m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0
Single-phase	Three-phase	kW	HP		l/min	0	5	10	15	20	25	30	35	40	50
CKRm 80E	CKR 80E	0.55	0.75	H metres	48	46	42	38	34	30	26	22	18	10	
CKRm 90E	CKR 90E	0.75	1		51	49	45	41	37	33	29	25	21	13	

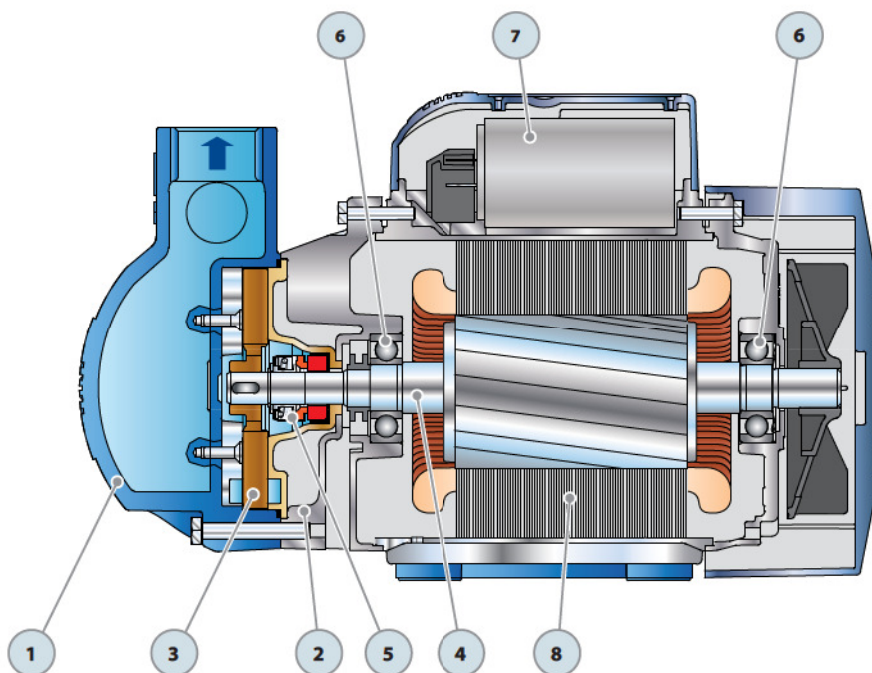
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

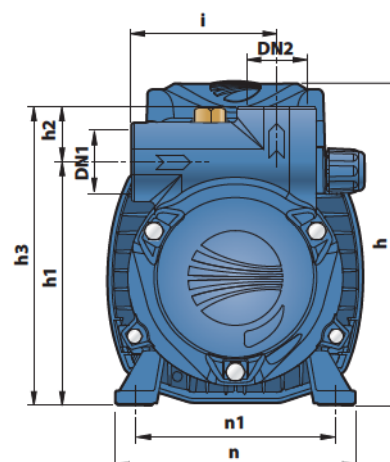
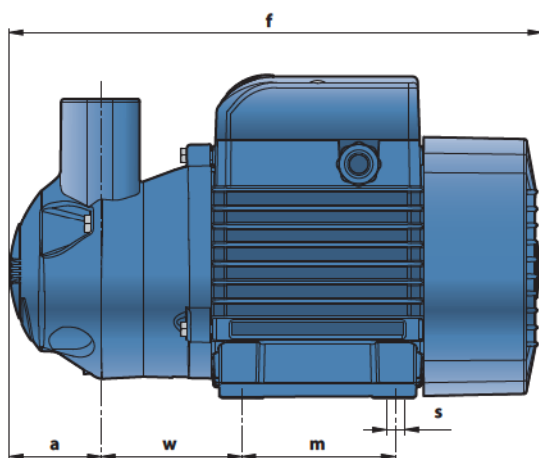
INSTALLATION EXAMPLE



POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Cast iron, with stainless steel insert to prevent impeller seizure due to the formation of rust . The pump body is complete 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, star type with open radial vanes				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		AR-12V	Ø 12 mm	Ceramic	Graphite	Viton
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)	(110 V)		
		CKRm 80E	16 µF 450 VL	60 µF 300 VL		
		CKRm 90E	20 µF 450 VL	60 µF 300 VL		
8	ELECTRIC MOTOR	CKRm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. CKR: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



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~
CKRm 80E	CKR 80E	1"	1"	50	296	180	136	31	167	81	90	140	112	77	7	10.8	9.9
CKRm 90E	CKR 90E															10.9	10.0

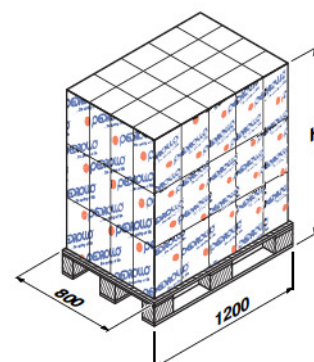
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
CKRm 80E	5.0 A	4.8 A	9.8 A
CKRm 90E	4.8 A	4.4 A	9.4 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
CKR 80E	3.5 A	2.0 A	1.2 A	3.4 A	2.0 A	1.2 A
CKR 90E	3.5 A	2.0 A	1.2 A	3.4 A	2.0 A	1.2 A

PALLETIZATION

MODEL		GROUPAGE			CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	n° pumps	H (mm)	kg	
				1~ 3~			1~ 3~	
CKRm 80E	CKR 80E	102	1370	1120 1030	136	1780	1490 1370	
CKRm 90E	CKR 90E	102	1370	1130 1040	136	1780	1500 1380	



PK-PQ /Bz

Pumps with peripheral impellers and bronze pump bodies



PERFORMANCE RANGE

- Flow rate up to **70 l/min** (4.2 m³/h)
- Head up to **90 m**

APPLICATION LIMITS

- Manometric suction lift up to **8 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **10 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



AN30



YxpTECT-003

INSTALLATION AND USE

Suitable for use with clean water that does not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

The design solution of these pumps guarantees against the formation of rust and oxidation. As a result of their compact design and characteristic curves they are suitable for use in industrial applications such as cooling and conditioning, etc.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605

OPTIONALS AVAILABLE ON REQUEST

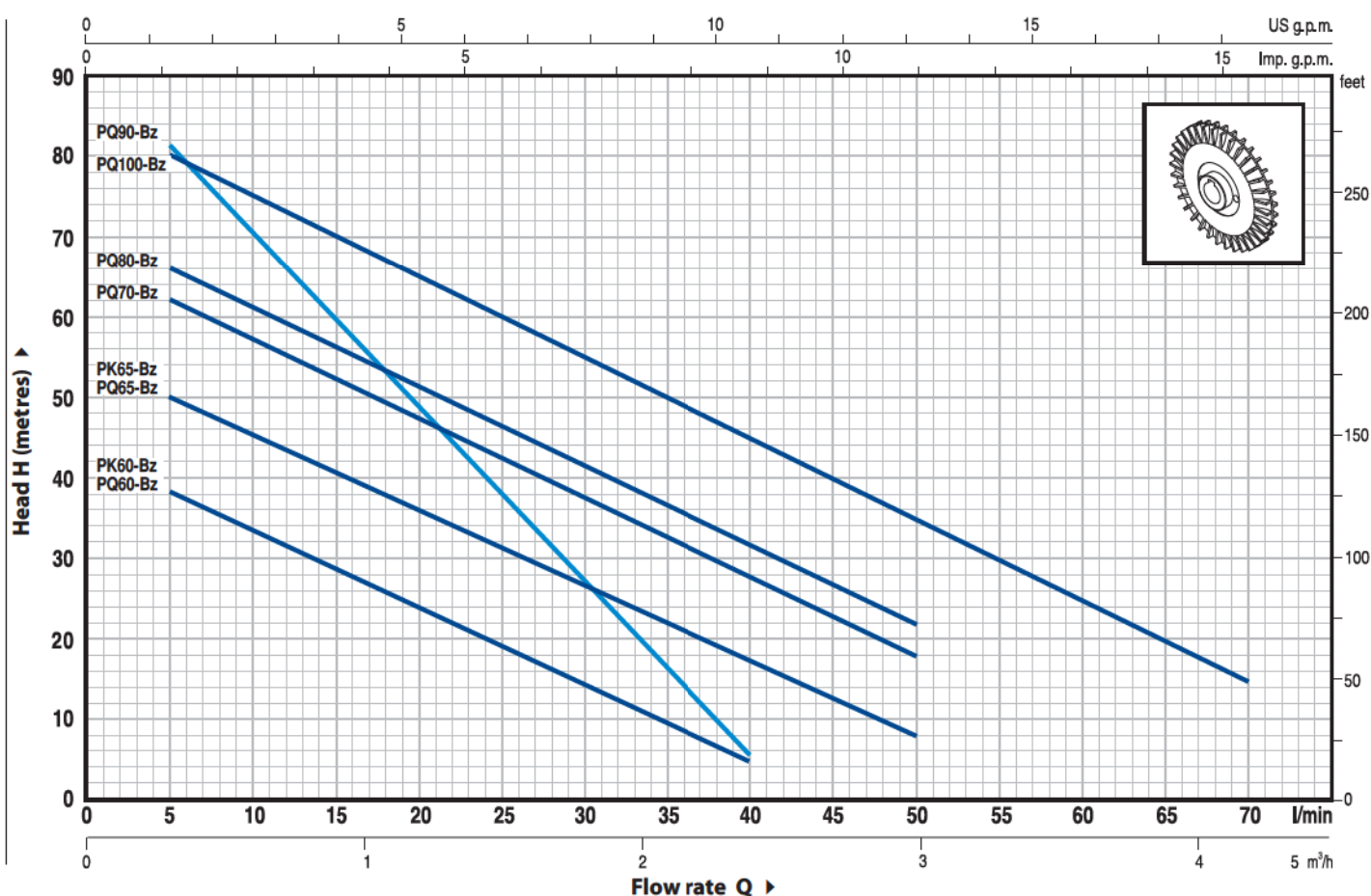
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP 55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

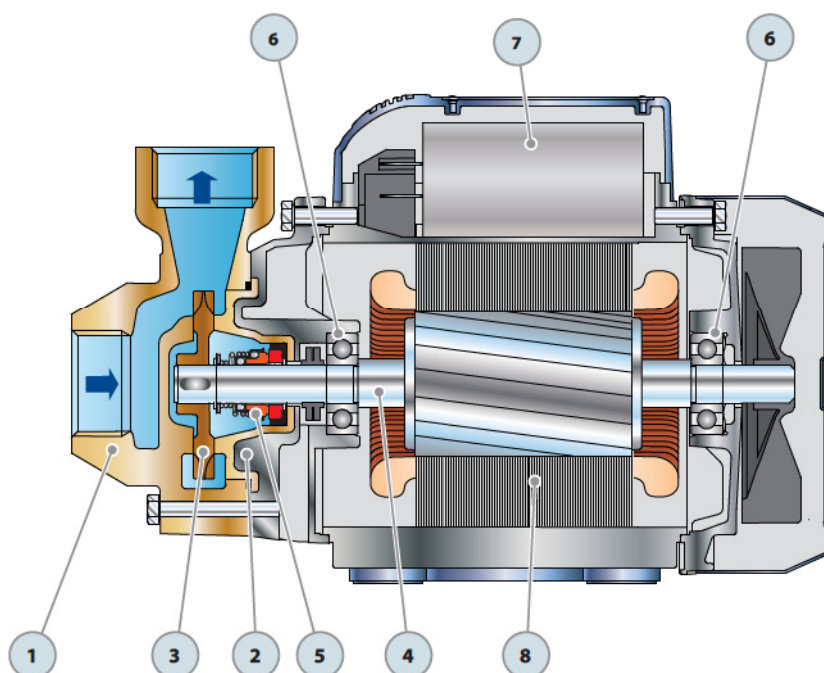


MODEL		POWER		Q	m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	4.2	
Single-phase	Three-phase	kW	HP		l/min	0	5	10	15	20	25	30	35	40	50	60	70	
PKm 60-Bz	PK 60-Bz	0.37	0.50	H metres		40	38	33.5	29	24	19.5	15	10	5				
PQm 60-Bz	PQ 60-Bz																	
PKm 65-Bz	PK 65-Bz	0.50	0.70			55	50	45.5	40.5	36	31	27	22	17	8			
PQm 65-Bz	PQ 65-Bz																	
PQm 70-Bz	PQ 70-Bz	0.60	0.85			65	62	57	52	47	42	37	32	27	18			
PQm 80-Bz	PQ 80-Bz	0.75	1			70	66	61	56	51	46	41	36.5	31	22			
PQm 90-Bz	PQ 90-Bz	0.75	1			90	82	71	60	49	38	27	17	5				
PQm 100-Bz	PQ 100-Bz	1.1	1.5			85	80	75	70	65	60	55	50	45	35	25	15	

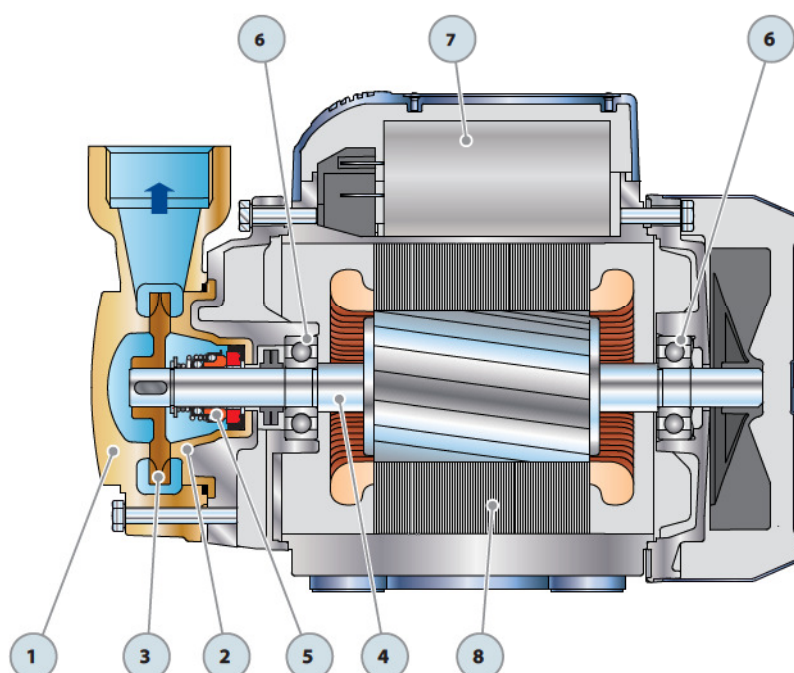
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

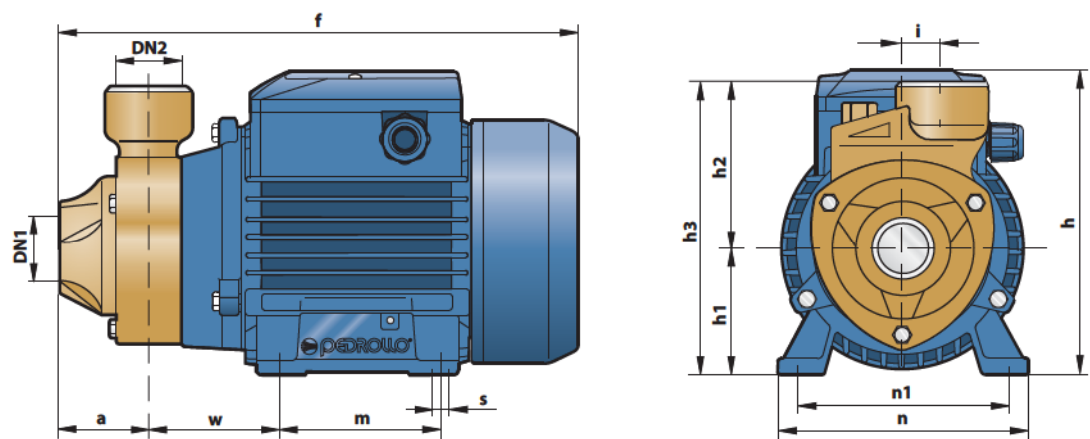
POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Bronze, complete with threaded ports in compliance with ISO 228/1				
2	MOTOR BRACKET	Aluminium with brass insert (patented), reduces the risk of impeller seizure				
3	IMPELLER	Brass, with peripheral radial vanes				
4	MOTOR SHAFT	Stainless steel AISI 316				
5	MECHANICAL SEAL	Seal	Shaft	Materials		
		Model	Diameter	Stationary ring	Rotational ring	Elastomer
		FN-12V	Ø 12 mm	Graphite	Ceramic	Viton
6	BEARINGS	6201 ZZ - C3 / 6201 ZZ - C3				
7	CAPACITOR	Pump	Capacitance			
		Single-phase	(230 V or 240 V)	(110 V)		
		PKm 60-Bz	10 µF 450 VL	25 µF 250 VL		
		PKm 65-Bz	14 µF 450 VL	30 µF 250 VL		
8	ELECTRIC MOTOR	PKm-Bz: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PK-Bz: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				



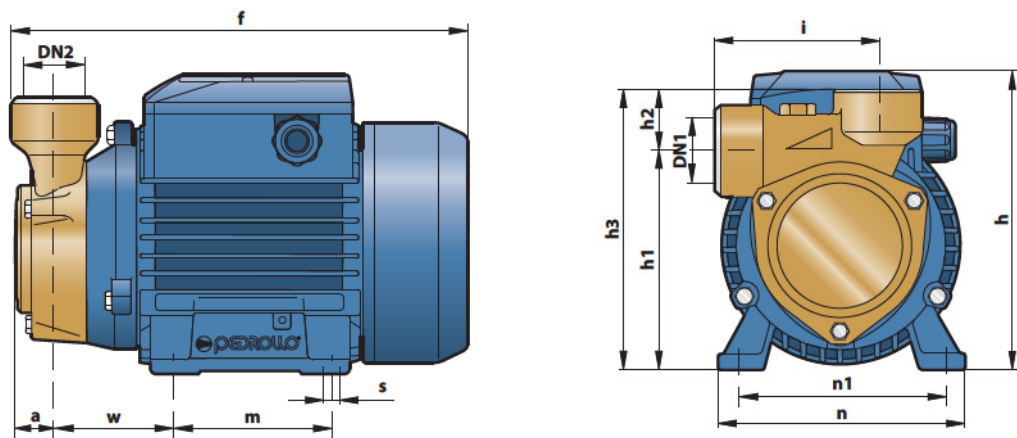
POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Bronze, complete with threaded ports in compliance with ISO 228/1					
2	MOTOR BRACKET	Aluminium with brass insert (patented), reduces the risk of impeller seizure					
3	IMPELLER	Brass, with peripheral radial vanes					
4	MOTOR SHAFT	Stainless steel AISI 316					
5	MECHANICAL SEAL	<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>
		PQ 60/65/70/80/90-Bz	FN-12V	Ø 12 mm	Graphite	Ceramic	Viton
		PQ 100-Bz	FN-14V	Ø 14 mm	Graphite	Ceramic	Viton
6	BEARINGS	<i>Pump</i>	<i>Model</i>				
		PQ 60/65-Bz	6201 ZZ - C3 / 6201 ZZ - C3				
		PQ 70/80/90-Bz	6203 ZZ - C3 / 6203 ZZ - C3				
		PQ 100-Bz	6204 ZZ - C3 / 6204 ZZ - C3				
7	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>				
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>		<i>(110 V)</i>		
		PQm 60-Bz	10 µF 450 VL		25 µF 250 VL		
		PQm 65-Bz	14 µF 450 VL		30 µF 250 VL		
		PQm 70-Bz	16 µF 450 VL		60 µF 300 VL		
		PQm 80-Bz	20 µF 450 VL		60 µF 300 VL		
		PQm 90-Bz	20 µF 450 VL		60 µF 300 VL		
		PQm 100-Bz	31.5 µF 450 VL		60 µF 250 VL		
8	ELECTRIC MOTOR	PQm-Bz: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PQ-Bz: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.					



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~
PKm 60-Bz	PK 60-Bz	1"	1"	42	243	152	63	75	138	20	80	120	100	55	7	5.7	5.7
PKm 65-Bz	PK 65-Bz			48	250			80	143							7.2	6.8



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-Bz	PQ 60-Bz	1"	1"	22	225	152	108	30	138	78	80	120	100	55	7	5.5	5.5
PQm 65-Bz	PQ 65-Bz						113		143					57		7.0	6.5
PQm 70-Bz	PQ 70-Bz				255	180	121		151	83	90	138	112	62		10.0	9.1
PQm 80-Bz	PQ 80-Bz						126		153	84						10.0	9.1
PQm 90-Bz	PQ 90-Bz				¾"	¾"	25		318	212	140	30	170	89		100	164
PQm 100-Bz	PQ 100-Bz	1"	1"	140	30	170		89			100	164	125	85	9	15.3	13.4

ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
Single-phase			
PKm 60-Bz	2.6 A	2.5 A	5.0 A
PKm 65-Bz	3.7 A	3.4 A	7.5 A

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
Single-phase			
PQm 60-Bz	2.6 A	2.5 A	5.0 A
PQm 65-Bz	3.7 A	3.4 A	7.5 A
PQm 70-Bz	5.2 A	4.8 A	10.8 A
PQm 80-Bz	5.2 A	4.8 A	10.8 A
PQm 90-Bz	5.6 A	5.1 A	11.5 A
PQm 100-Bz	9.0 A	8.2 A	18.0 A

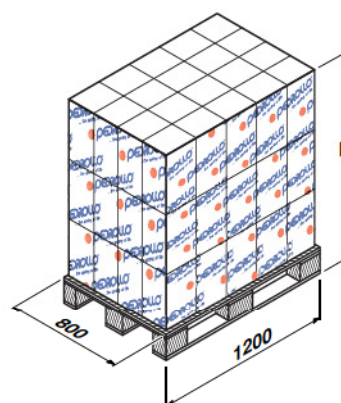
MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
PK 60-Bz	1.9 A	1.15 A	0.6 A	1.9 A	1.1 A	0.6 A
PK 65-Bz	2.9 A	1.7 A	0.9 A	2.8 A	1.6 A	0.9 A

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
PQ 60-Bz	1.9 A	1.15 A	0.6 A	1.9 A	1.1 A	0.6 A
PQ 65-Bz	2.9 A	1.7 A	0.9 A	2.8 A	1.6 A	0.9 A
PQ 70-Bz	3.8 A	2.2 A	1.3 A	3.3 A	1.9 A	1.1 A
PQ 80-Bz	3.8 A	2.2 A	1.3 A	3.3 A	1.9 A	1.1 A
PQ 90-Bz	4.2 A	2.4 A	1.4 A	3.8 A	2.2 A	1.3 A
PQ 100-Bz	6.3 A	3.6 A	2.05 A	5.7 A	3.3 A	1.9 A

PALLETIZATION

MODEL		GROUPAGE / CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	
				1~	3~
PKm 60-Bz	PK 60-Bz	192	1460	1100	1100
PKm 65-Bz	PK 65-Bz	216	1630	1580	1490

MODEL		GROUPAGE / CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	
				1~	3~
PQm 60-Bz	PQ 60-Bz	192	1460	1080	1080
PQm 65-Bz	PQ 65-Bz	216	1630	1530	1420
PQm 70-Bz	PQ 70-Bz	120	1270	1220	1110
PQm 80-Bz	PQ 80-Bz	120	1270	1220	1110
PQm 90-Bz	PQ 90-Bz	120	1280	1240	1110
PQm 100-Bz	PQ 100-Bz	72	1490	1120	990



PK-PQ /I

Pumps with stainless steel pump body



PERFORMANCE RANGE

- Flow rate up to **40 l/min** (2.4 m³/h)
- Head up to **40 m**

APPLICATION LIMITS

- Manometric suction lift up to **8 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **10 bar**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use with clean water that does not contain abrasive particles and liquids that are not chemically aggressive towards the materials from which the pump is made.

The design solution of these pumps guarantees against the formation of rust and oxidation. As a result of their compact design and characteristic curves they are suitable for use in industrial applications such as cooling and conditioning, etc.

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

PATENTS - TRADE MARKS - MODELS

- Motor bracket: patent n° IT1243605

OPTIONALS AVAILABLE ON REQUEST

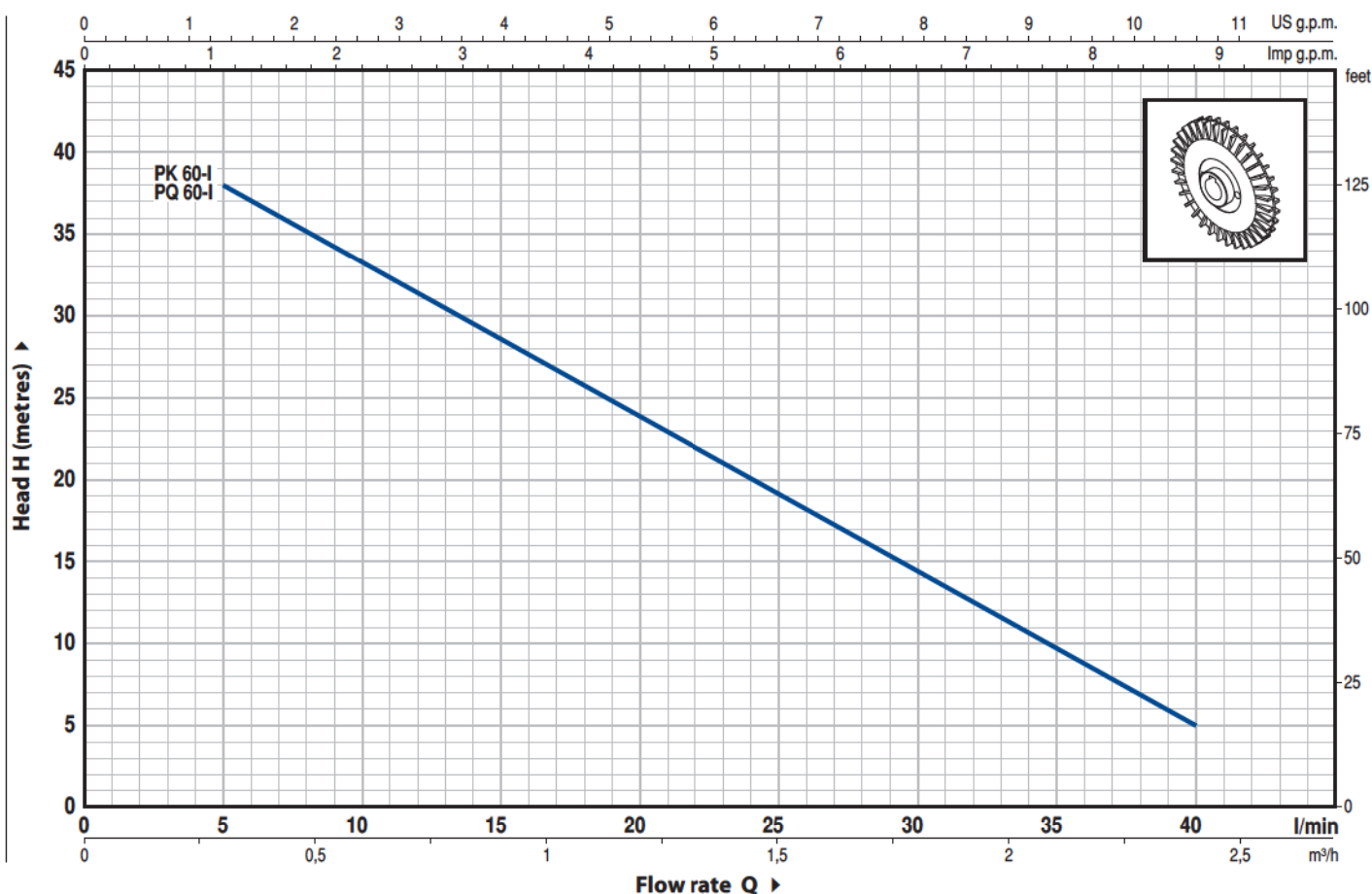
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP 55 class protection

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

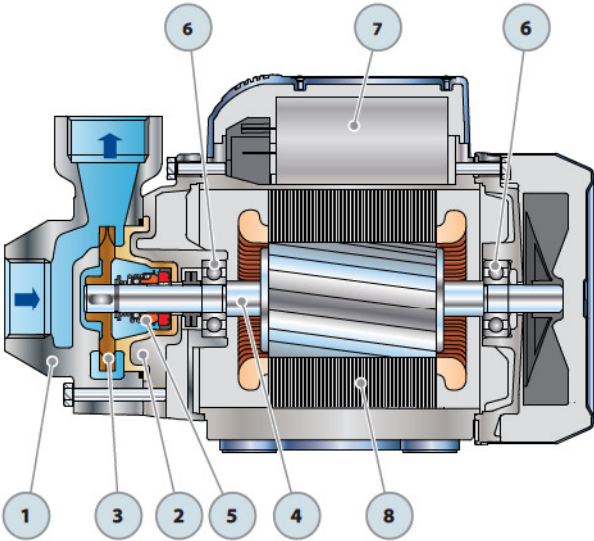


MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4
Single-phase	Three-phase	kW	HP		0	5	10	15	20	25	30	35	40
PKm 60-I	PK 60-I	0.37	0.50	H metres	40	38	33.5	29	24	19.5	15	10	5
PQm 60-I	PQ 60-I												

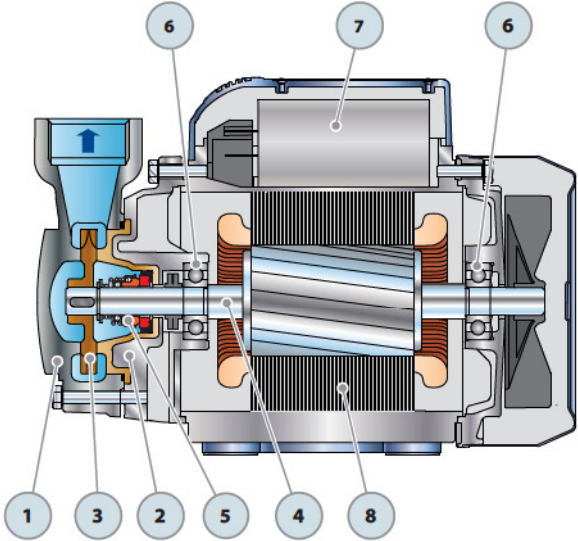
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Precision cast stainless steel AISI 316, complete 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 AISI 316				
5	MECHANICAL SEAL	<i>Pump Model</i>	<i>Seal Model</i>	<i>Shaft Diameter</i>	<i>Materials</i>	
					<i>Stationary ring</i>	<i>Rotational ring</i>
		PK 60-I PQ 60-I	FN-12V	Ø 12 mm	Graphite	Ceramic Viton
6	BEARINGS	<i>Pump Model</i>	<i>Model</i>			
		PK 60-I PQ 60-I	6201 ZZ - C3 / 6201 ZZ - C3			
7	CAPACITOR	<i>Pump Single-phase</i>	<i>Capacitance (230 V or 240 V)</i>		<i>(110 V)</i>	
		PKm 60-I PQm 60-I	10 µF 450 VL		25 µF 250 VL	
8	ELECTRIC MOTOR	PKm-I PQm-I: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. PK-I PQ-I: three-phase 230/400 V - 50 Hz. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 44.				

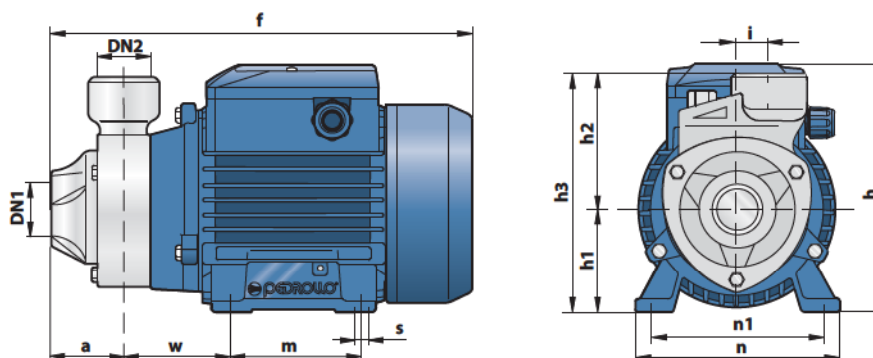


PK 60-I

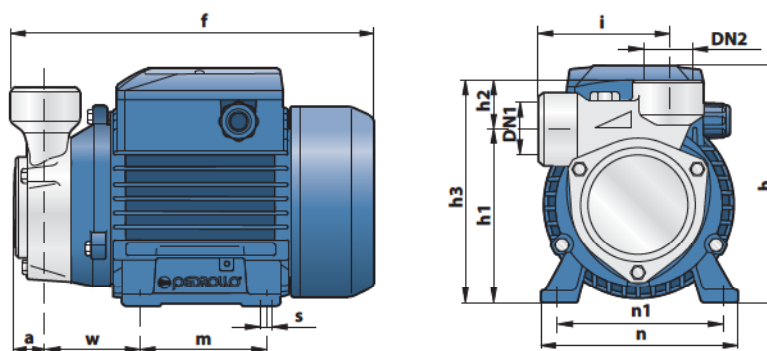


PQ 60-I

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~
PKm 60-I	PK 60-I	1"	1"	42	245	152	63	75	138	20	80	120	100	55	7	5.5	5.5



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-I	PQ 60-I	1"	1"	22	225	152	108	30	138	78	80	120	100	55	7	5.4	5.4

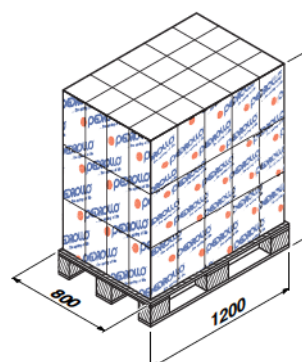
ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
PKm 60-I	2.5 A	2.4 A	5.0 A
PQm 60-I	2.5 A	2.4 A	5.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
PK 60-I	1.9 A	1.15 A	0.6 A	1.9 A	1.1 A	0.6 A
PQ 60-I	1.9 A	1.15 A	0.6 A	1.9 A	1.1 A	0.6 A

PALLETIZATION

MODEL		GROUPAGE / CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	
PKm 60-I	PK 60-I	192	1460	1080	1080
PQm 60-I	PQ 60-I	192	1460	1060	1060





PERFORMANCE RANGE

- Flow rate up to **6000 l/min** (360 m³/h)
- Head up to **95 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. pressure in pump body **10 bar** (PN10)
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



Pump body dimensions in compliance with **EN 733**

CERTIFICATIONS



INSTALLATION AND USE

- Water supply
- Pressure boosting
- Irrigation
- Water circulation in climatisation sets
- Cleaning sets
- Firefighting sets
- Industrial applications
- Agricultural applications

The pumps must be installed in enclosed places, or at least protected against inclement weather.

OPTIONALS AVAILABLE ON REQUEST

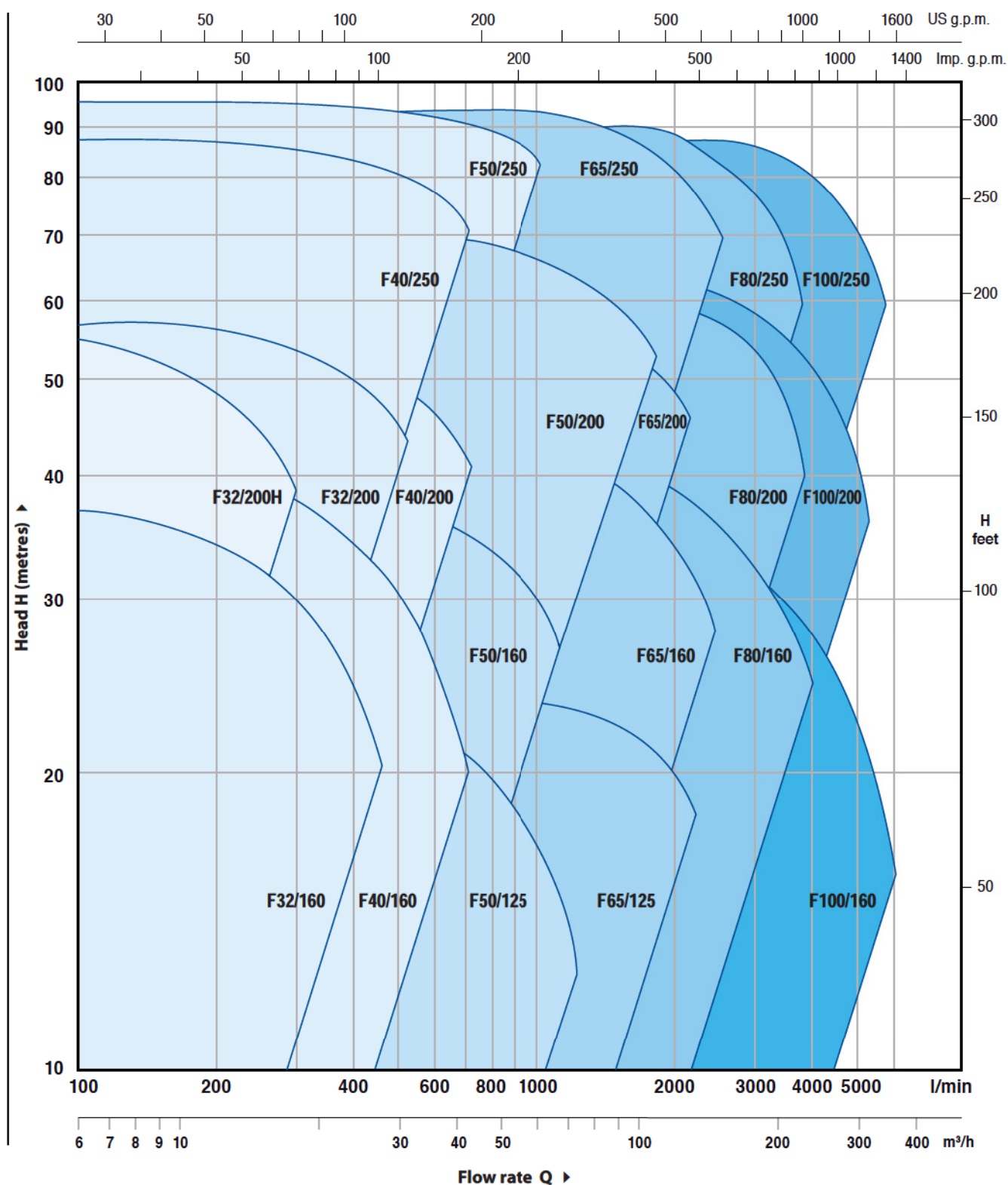
- Special mechanical seal
- Other voltages or 60 Hz frequency
- Compatibility with hotter or colder liquids
- Compatibility with hotter or colder ambients

GUARANTEE

2 years subject to terms and conditions

PERFORMANCE RANGE

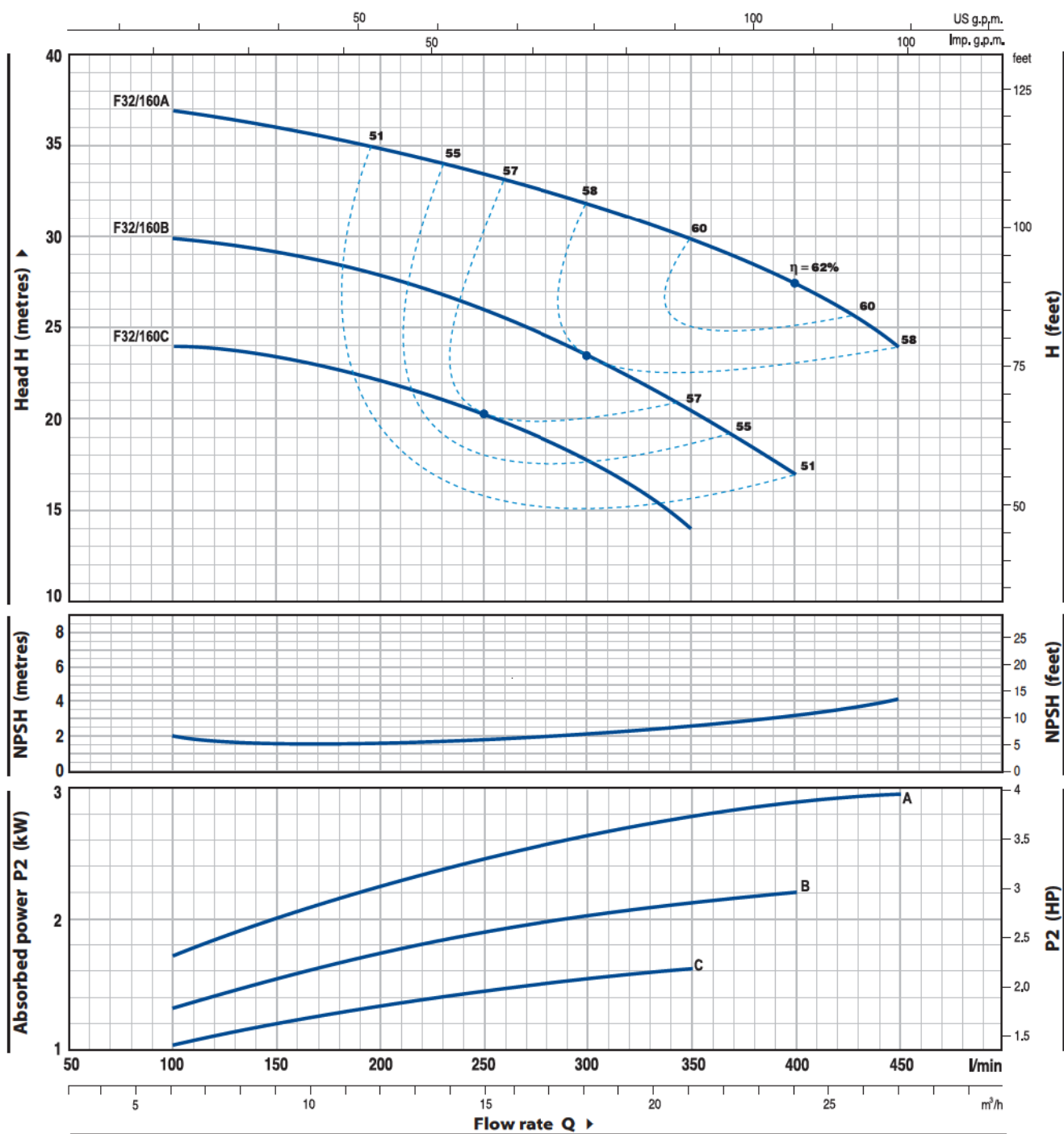
50 Hz n= 2900 1/min HS= 0 m



F32/160

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



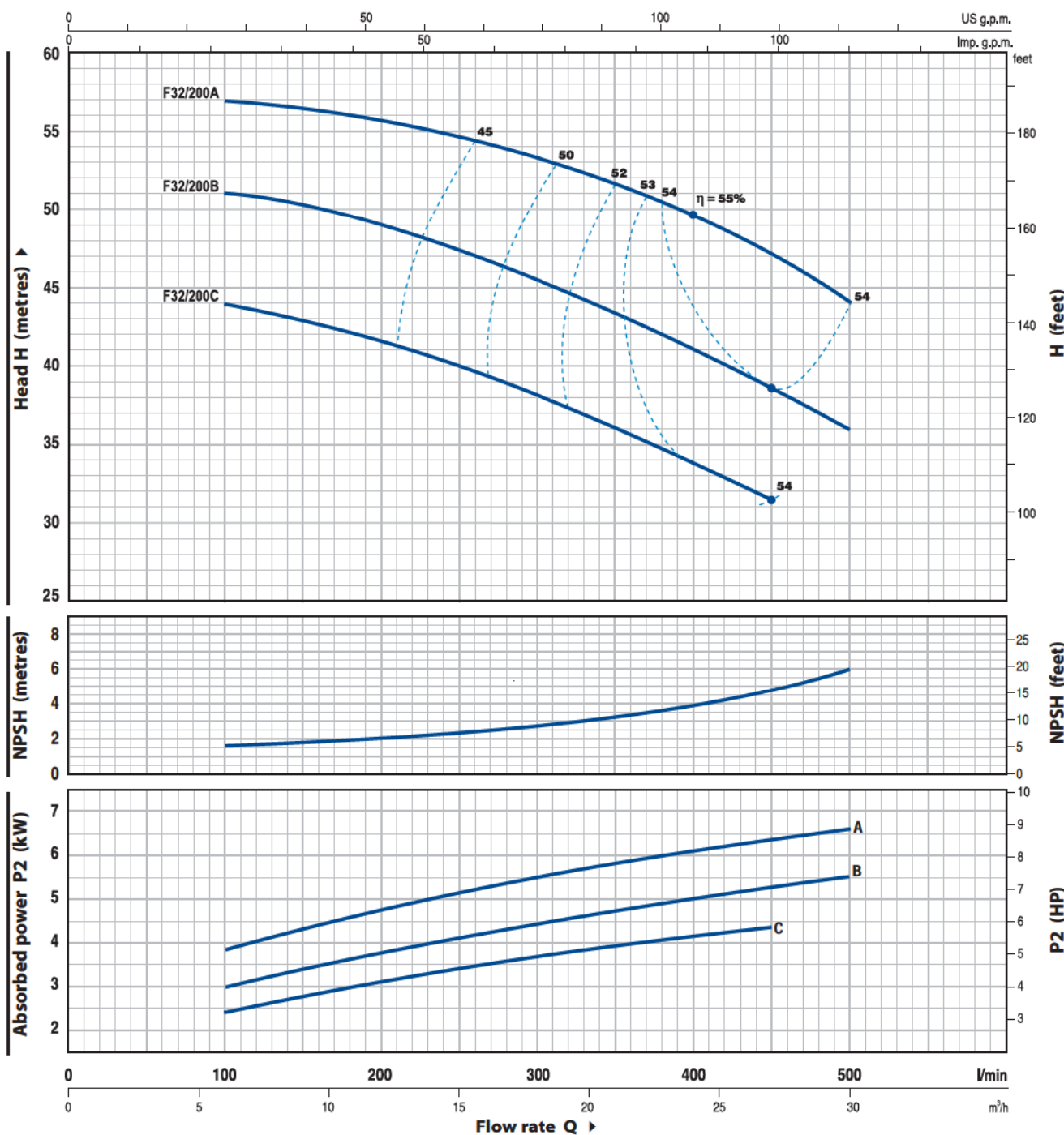
MODEL		POWER		Q	0	6	9	12	15	18	21	24	27
Single-phase	Three-phase	kW	HP		0	100	150	200	250	300	350	400	450
Fm 32/160C	F 32/160C	1.5	2	H metres	25	24	23.5	22	20.5	18	14		
Fm 32/160B	F 32/160B	2.2	3		31	30	29	28	26	23.5	20.5	17	
-	F 32/160A	3	4		38	37	36	35	33.5	31.5	30	27.5	24

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	0	6	9	12	15	18	21	24	27	30
	kW	HP		0	100	150	200	250	300	350	400	450	500
F 32/200C	4	5.5	H metres	46	44	43	41.5	40	38	36	34	31.5	
F 32/200B	5.5	7.5		52	51	50.5	49	47	45	43	41	38.5	36
F 32/200A	7.5	10		60	57	56.5	56	55	53.5	52	50	47	44

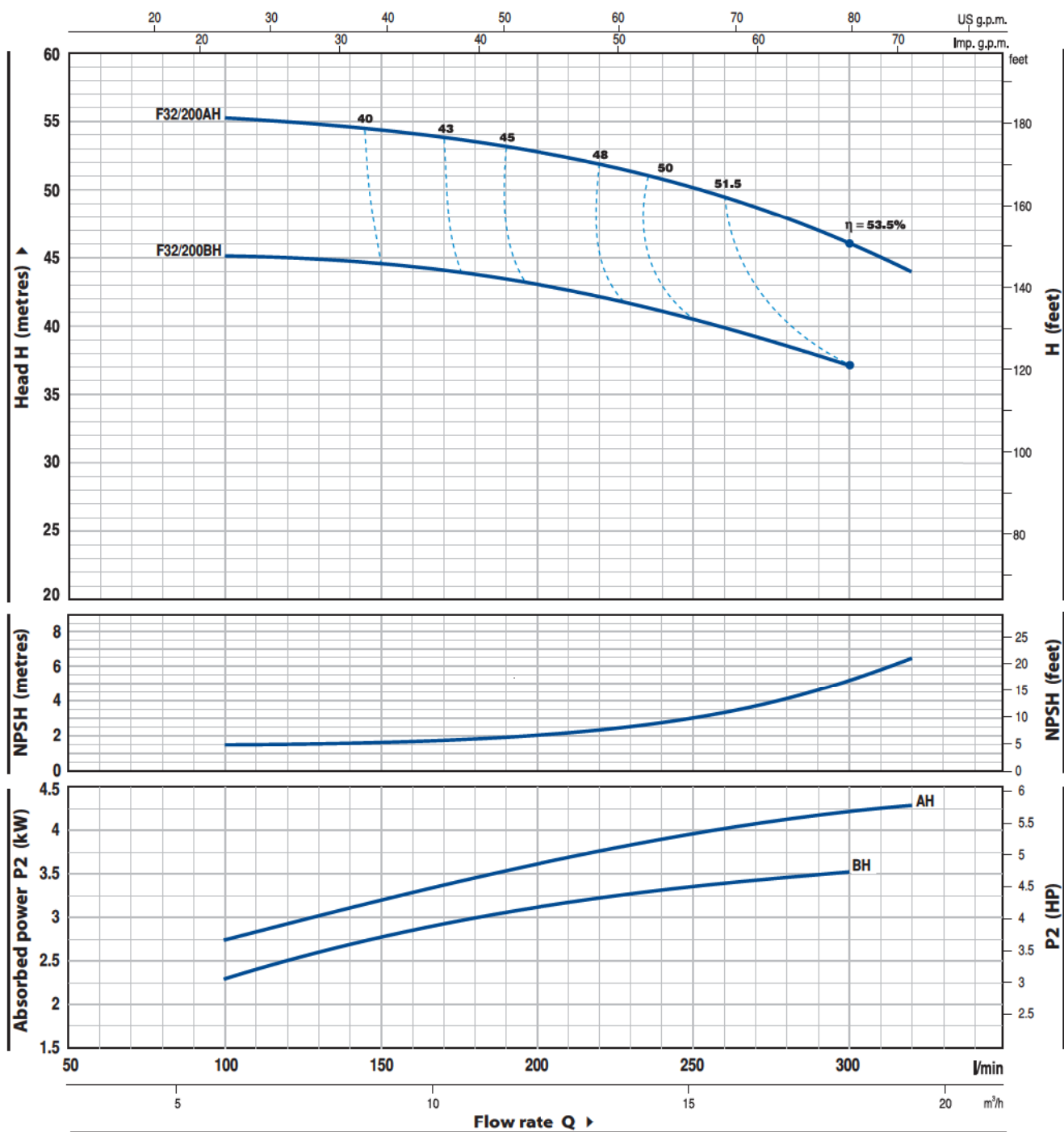
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F32/200H

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



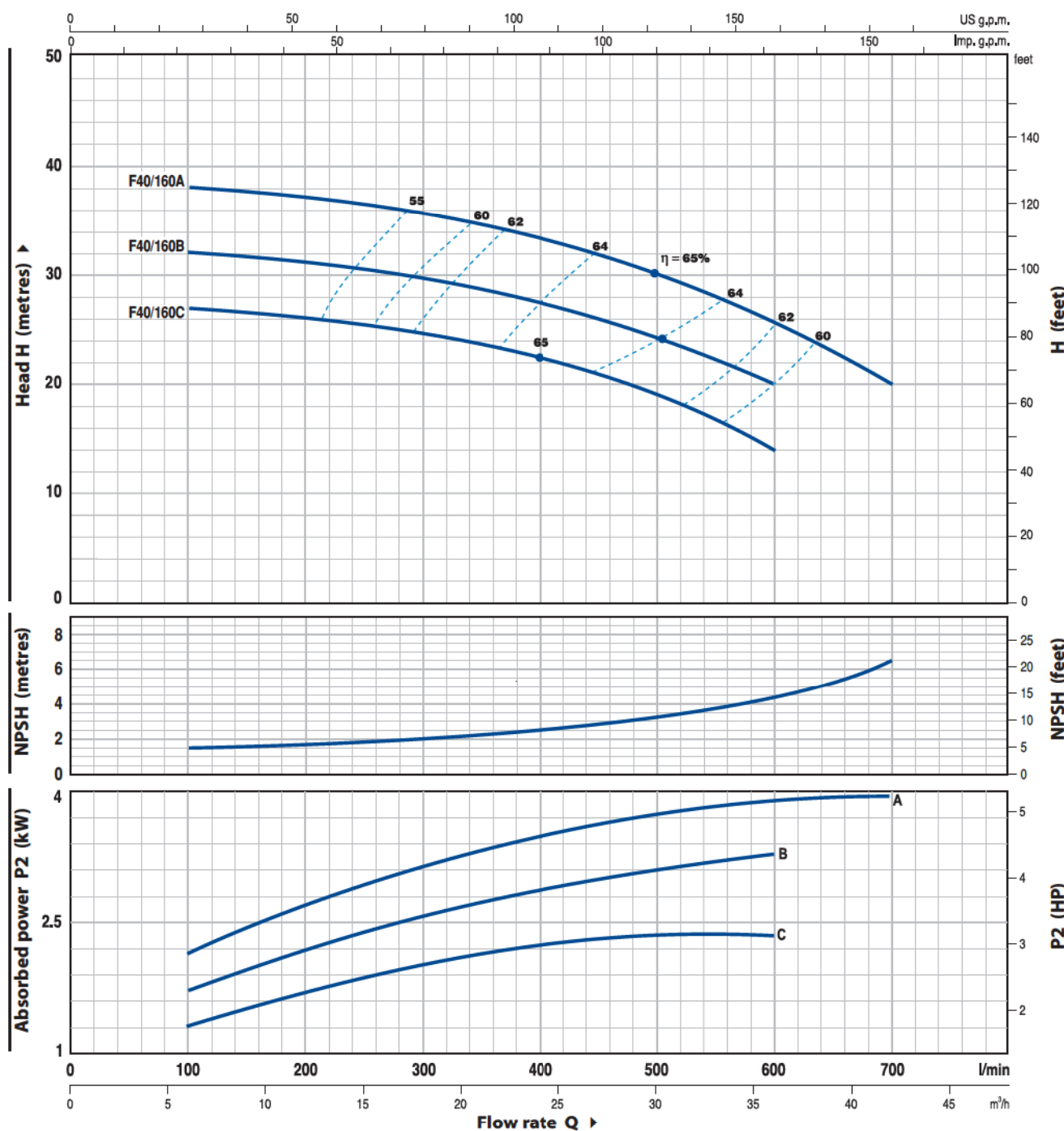
MODEL	POWER		Q	0	6	9	12	15	18	19.2
	kW	HP		0	100	150	200	250	300	320
F 32/200BH	3	4	H metres	47	45	44.5	43	40.5	37	
F 32/200AH	4	5.5		57	55	54	52.5	50	46	44

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL		POWER		Q											
Single-phase	Three-phase	kW	HP		m³/h	0	6	9	12	15	18	24	30	36	42
Fm 40/160C	F 40/160C	2.2	3	H metres	l/min	0	100	150	200	250	300	400	500	600	700
-	F 40/160B	3	4			27	27	26.5	26	25.5	25	22.5	19	14	
-	F 40/160A	4	5.5			32	32	31.5	31	30.5	30	27.5	24	20	
						38	38	37.8	37	36.5	36	33.5	30	26	20

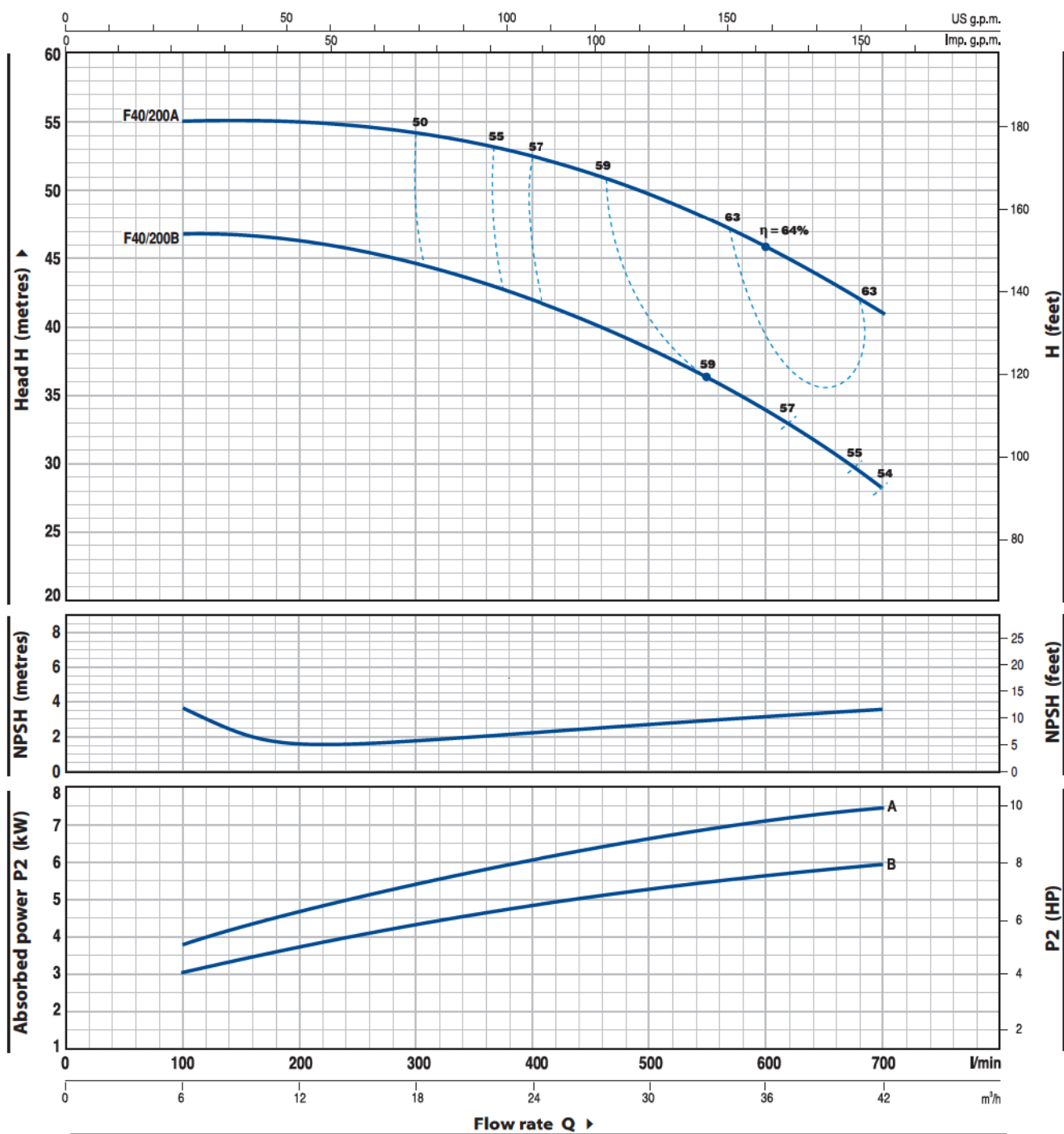
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F40/200

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



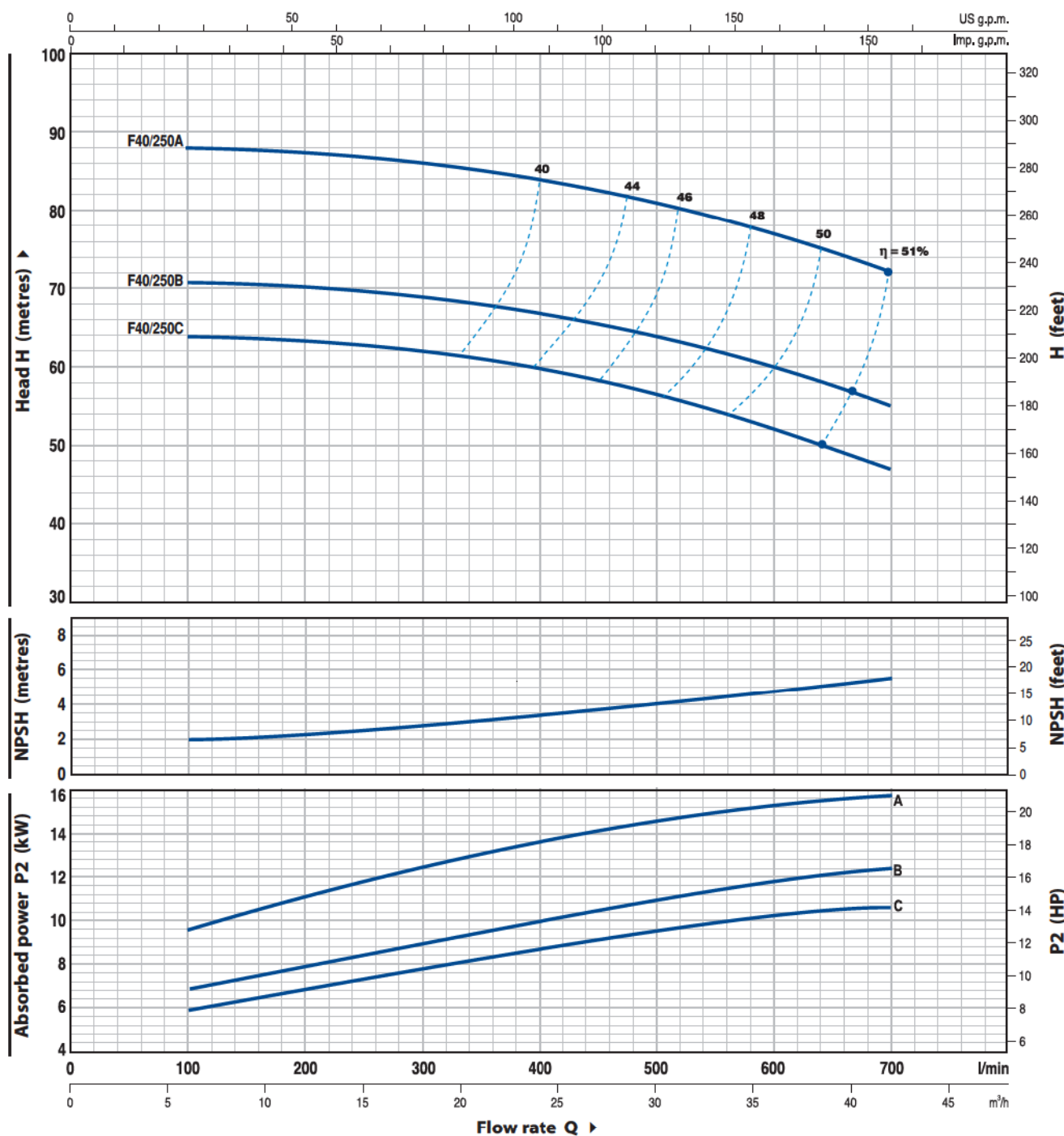
MODEL	POWER		Q	0	6	9	12	15	18	24	30	36	42
	kW	HP		0	100	150	200	250	300	400	500	600	700
Three-phase													
F 40/200B	5.5	7.5	H metres	48	47	46.5	46	45.5	44.5	42	38	34	28
F 40/200A	7.5	10		56	55	55	55	54.5	54	52.5	49.5	46	41

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	0	6	9	12	15	18	24	30	36	42
	kW	HP		0	100	150	200	250	300	400	500	600	700
Three-phase													
F 40/250C	9.2	12.5	H metres	64	64	63.5	63	62.5	62	60	56.5	52.5	47
F 40/250B	11	15		71	71	70.5	70	69.5	69	67	64	60	55
F 40/250A	15	20		88	88	87.5	87	86.5	86	84	81	77	72

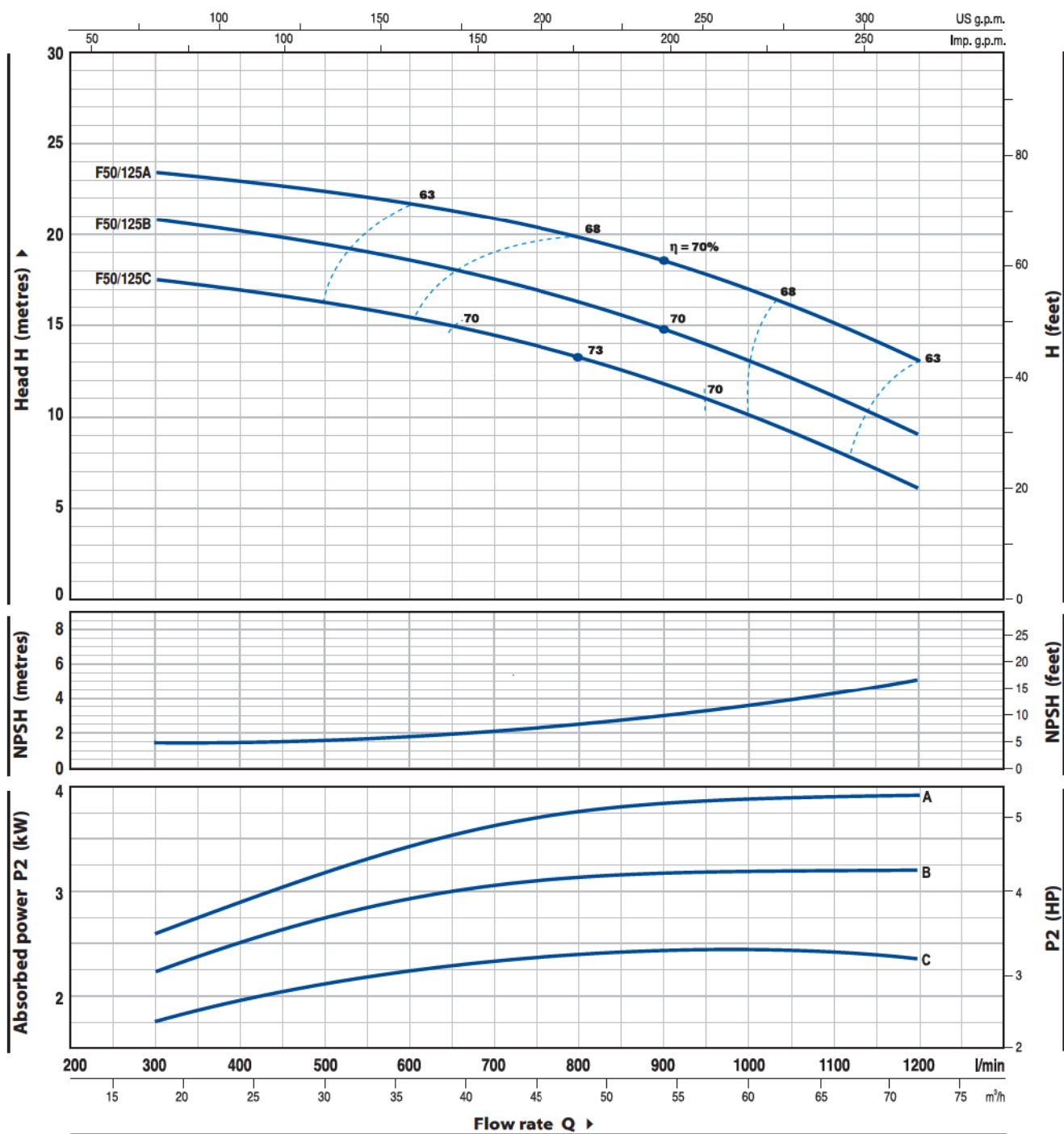
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F50/125

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



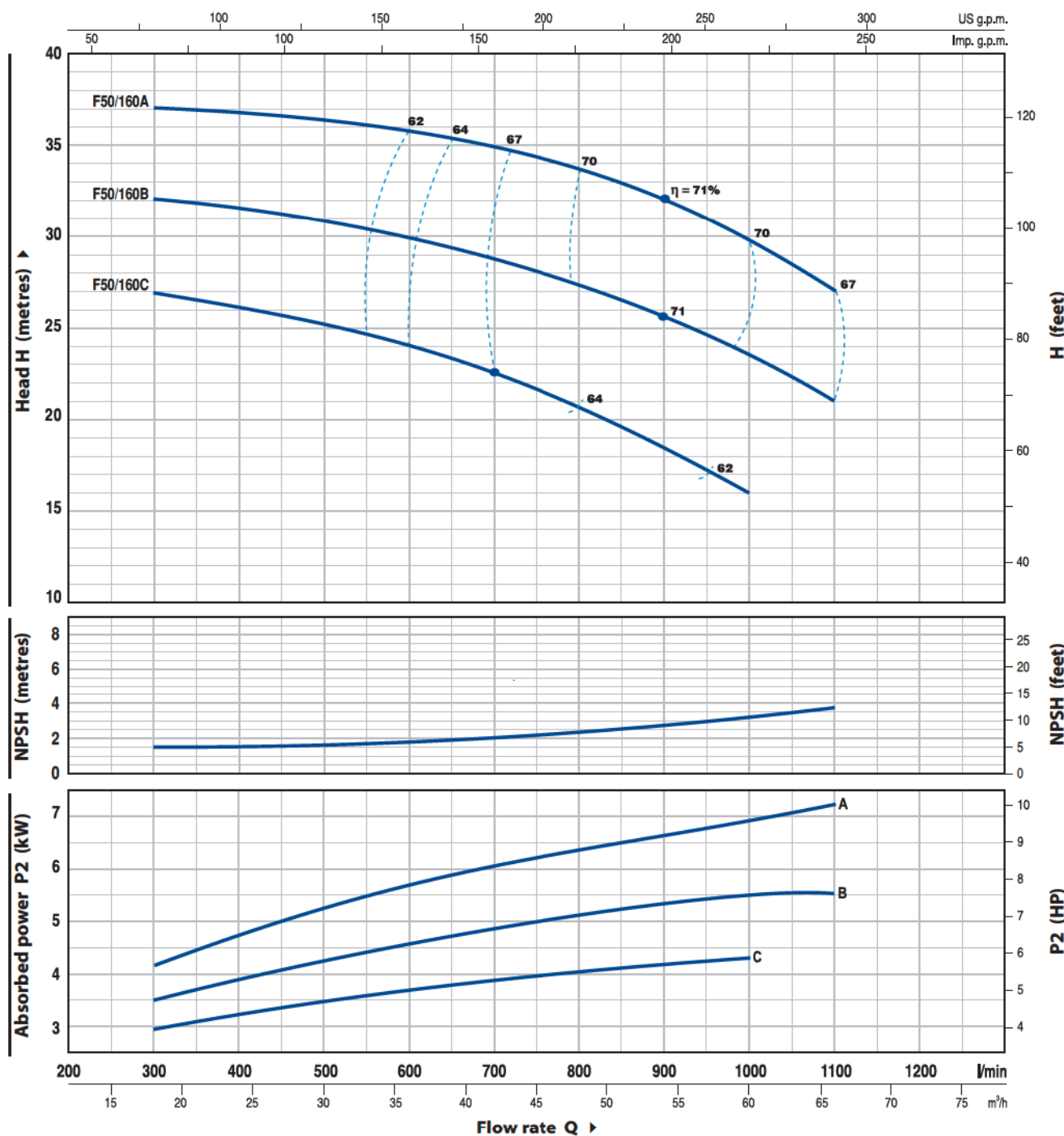
MODEL		POWER		Q	0	18	24	30	36	42	48	54	60	66	72
Single-phase	Three-phase	kW	HP		0	300	400	500	600	700	800	900	1000	1100	1200
Fm 50/125C	F 50/125C	2.2	3	H metres	18.5	17.5	17	16.5	15.5	14.8	13.5	12	10.5	8.2	6
-	F 50/125B	3	4		21.5	20.7	20	19.5	18.8	17.8	16.5	15	13.5	11.2	9
-	F 50/125A	4	5.5		24.5	23.5	23	22.5	21.8	20.8	19.5	18.3	16.8	15	13

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	0	18	24	30	36	42	48	54	60	66
	kW	HP		0	300	400	500	600	700	800	900	1000	1100
Three-phase													
F 50/160C	4	5.5	H metres	27	27	26.5	25	24.5	23	20	18.5	16	
F 50/160B	5.5	7.5		33	32	31.7	31	30	29	27	26	24	21
F 50/160A	7.5	10		38	37	36.8	36.5	36	34	33	32	30	27

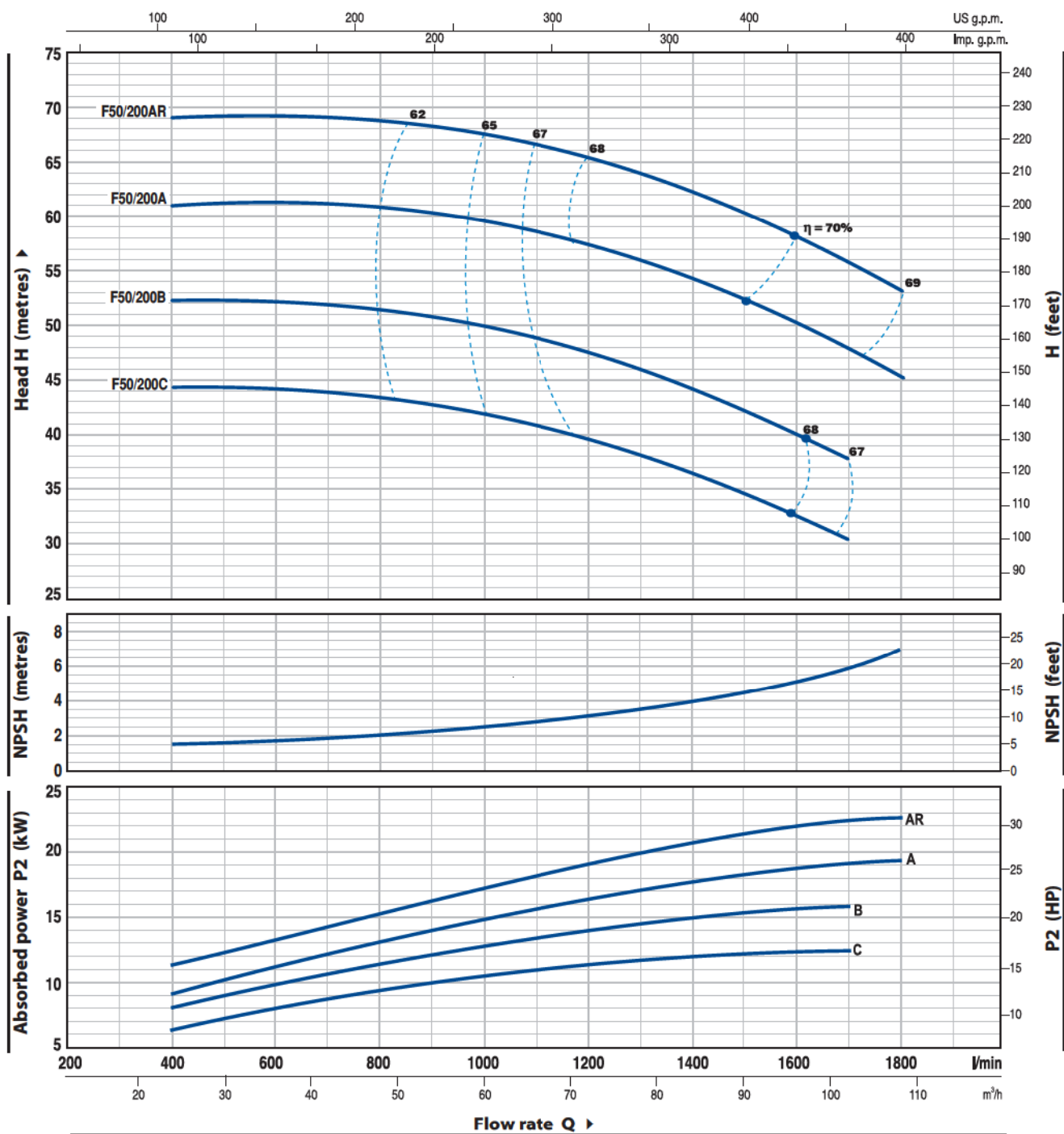
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F50/200

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



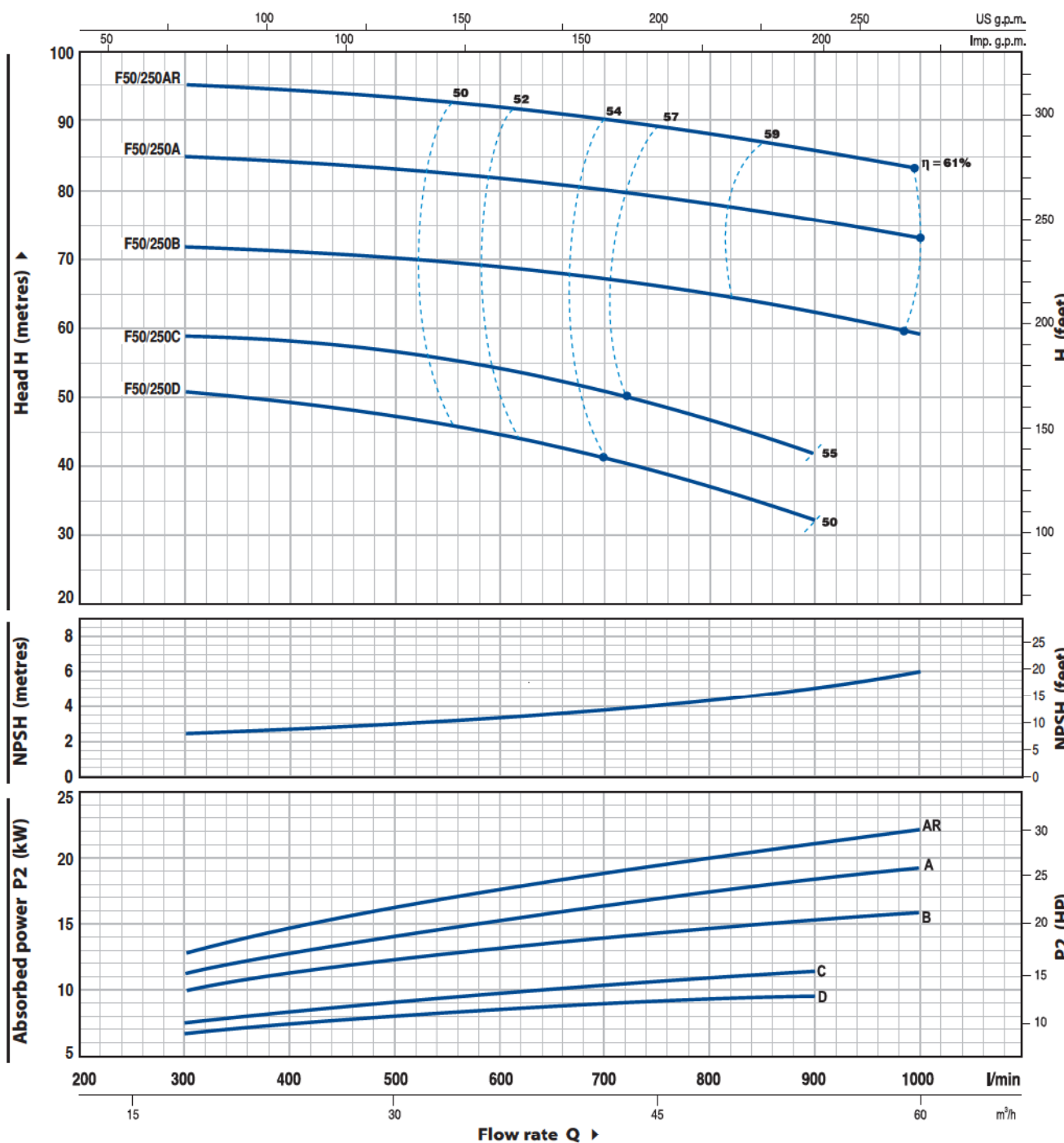
MODEL	POWER		Q	24	36	48	60	72	84	96	102	108
	kW	HP		400	600	800	1000	1200	1400	1600	1700	1800
Three-phase												
F 50/200C	11	15	H metres	44	44	44	42	39	36	33	30	
F 50/200B	15	20		52	52	52	50	47	44	40	38	
F 50/200A	18.5	25		61	61	60.5	60	57	54	50	48	45
F 50/200AR	22	30		69	69	68.5	68	65	62	58	56	53

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q										
	kW	HP		m³/h	0	18	24	30	36	42	48	54	60
Three-phase				l/min	0	300	400	500	600	700	800	900	1000
F 50/250D	9.2	12.5	H metres		51	51	49	47	44	41	37	32	
F 50/250C	11	15			59	59	58	57	54	51	47	42	
F 50/250B	15	20			72	72	71	70	69	67	65	62	59
F 50/250A	18.5	25			85	85	84	83	82	80	78	76	73
F 50/250AR	22	30			95	95	94	93	92	90	88	86	83

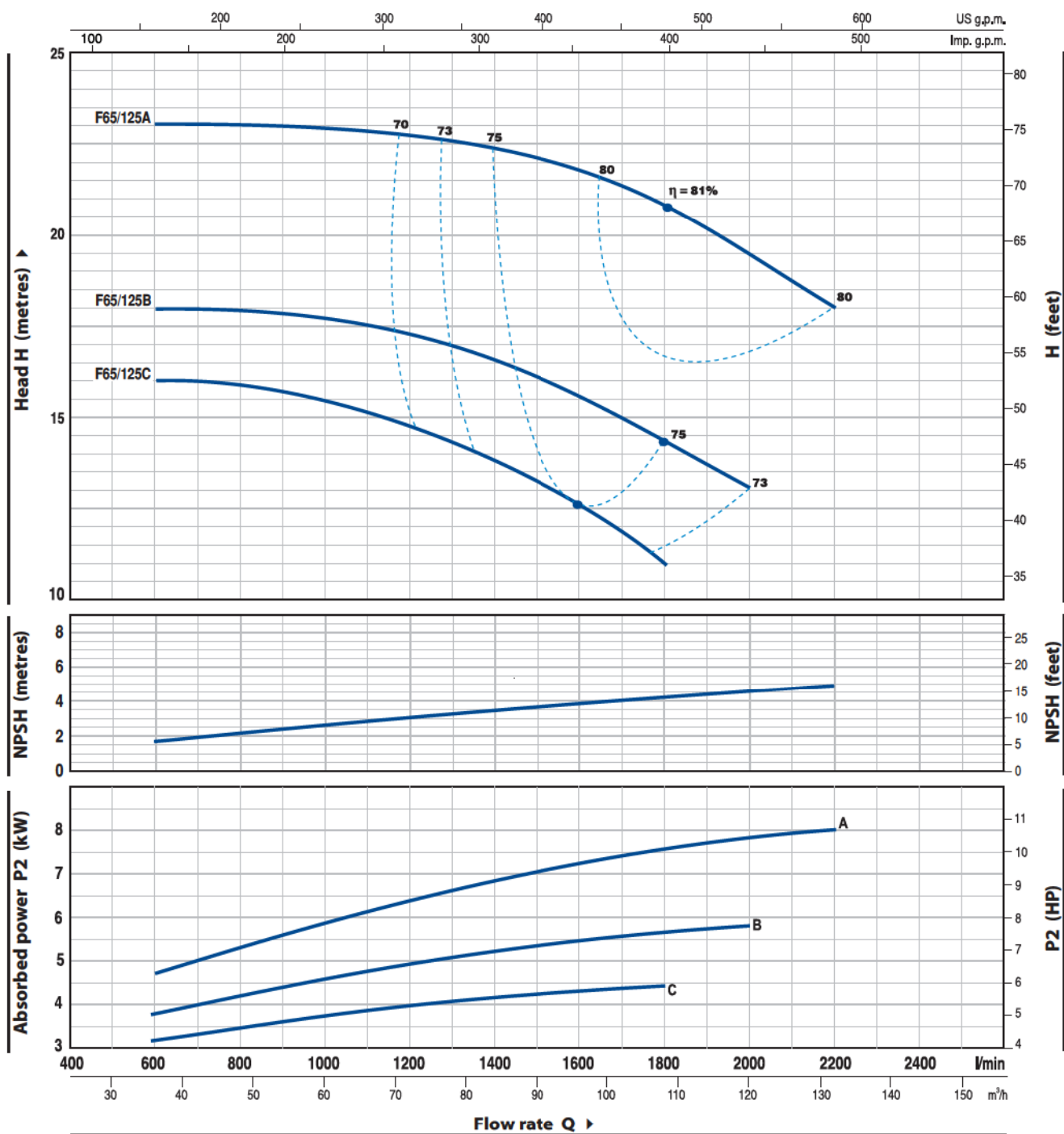
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F65/125

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



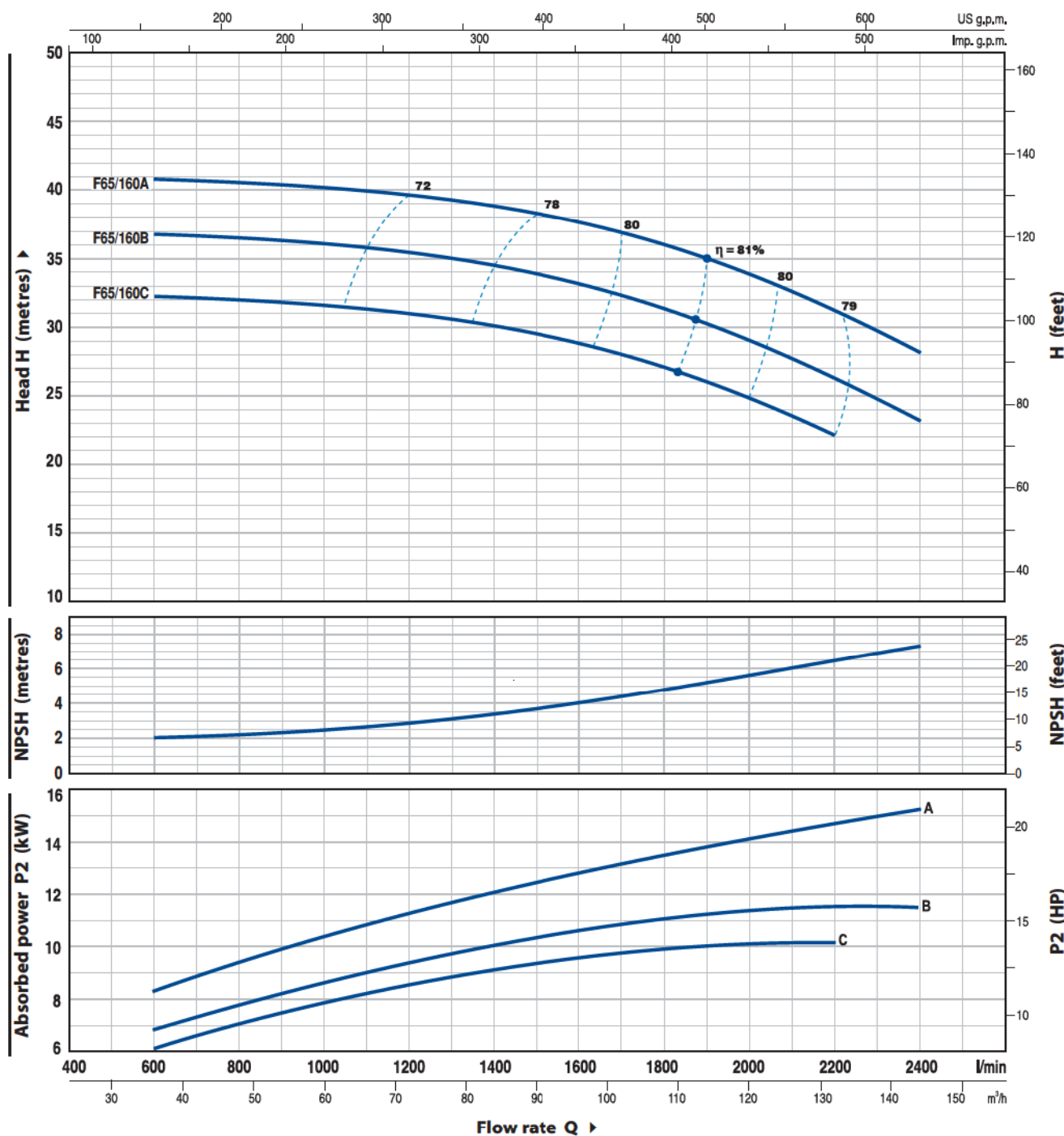
MODEL	POWER		Q	0	36	48	60	72	84	96	108	120	132
	kW	HP		0	600	800	1000	1200	1400	1600	1800	2000	2200
Three-phase													
F 65/125C	4	5.5	H metres	16	16	16	15.5	14.5	13.5	12.5	11		
F 65/125B	5.5	7.5		18	18	18	18	17	16.5	15.5	14.5	13	
F 65/125A	7.5	10		23	23	23	23	22.5	22.5	22	21	19.5	18

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	0	36	48	60	72	84	96	108	120	132	144
	kW	HP		0	600	800	1000	1200	1400	1600	1800	2000	2200	2400
Three-phase														
F 65/160C	9.2	12.5	H metres	32	32	32	32	32	30	29	27	25	22	
F 65/160B	11	15		37	36.5	36.5	36	35.5	34	33	31	29	26	23
F 65/160A	15	20		41	40.5	40.5	40	39.5	39	37.5	36	34	31	28

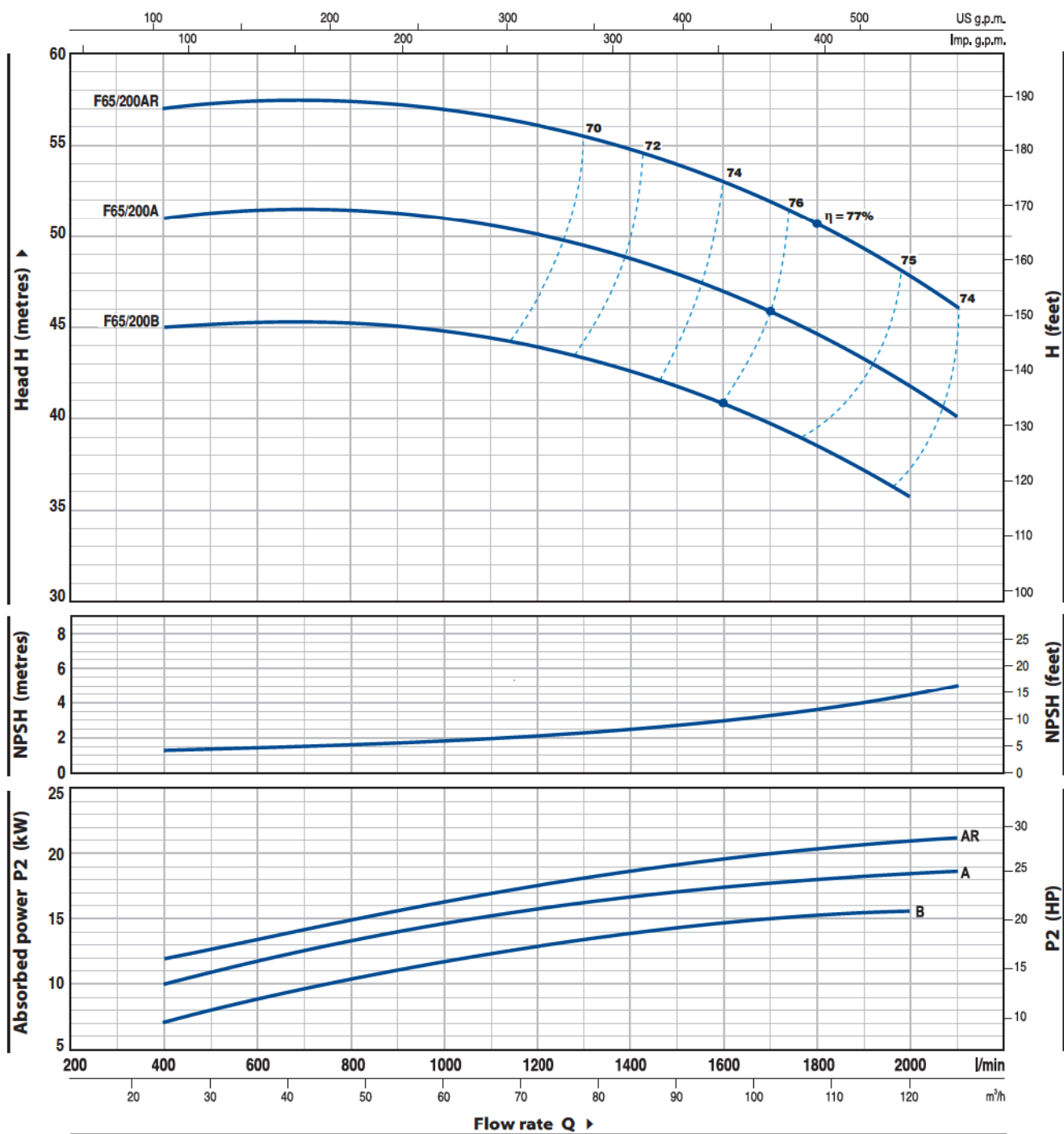
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F65/200

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



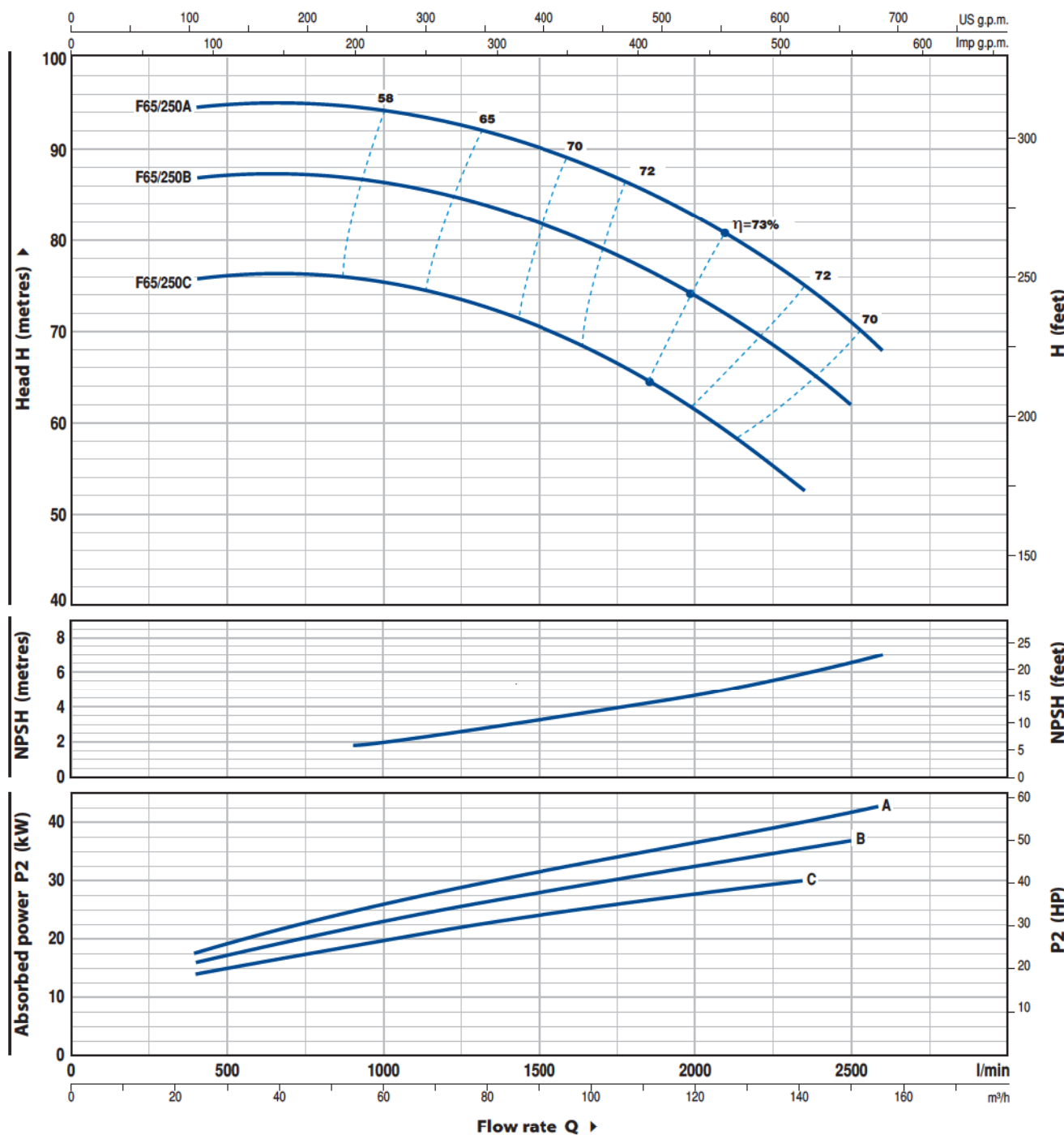
MODEL	POWER		Q	24	36	48	60	72	84	96	108	120	126
	kW	HP		400	600	800	1000	1200	1400	1600	1800	2000	2100
Three-phase													
F 65/200B	15	20	H metres	45	45	45	45	44	42.5	41	38.5	35.5	
F 65/200A	18.5	25		51	51	51	51	50	49	47	44.5	41.5	40
F 65/200AR	22	30		57	57	57	57	56	55	53	50.5	47.5	46

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	24	40	60	80	100	120	141	150	156
	kW	HP		400	667	1000	1333	1667	2000	2350	2500	2600
Three-phase												
F 65/250C	30	40	H metres	76	76	75.5	72.5	68	61.5	53		
F 65/250B	37	50		87	87	86	84	80	74	66.5	62	
F 65/250A	45	60		94.5	95	94	92	88	82.5	75	71	68

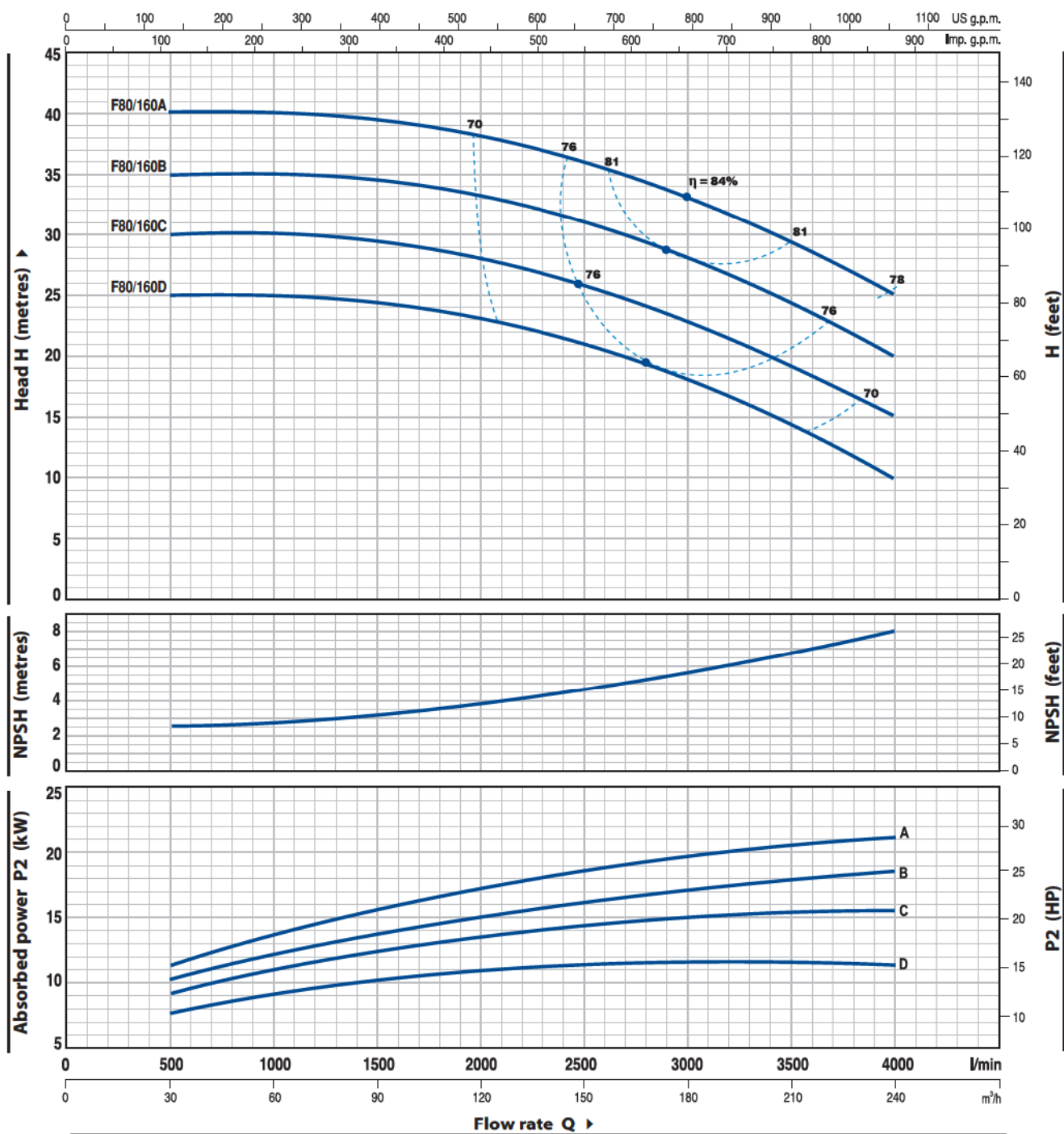
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F80/160

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



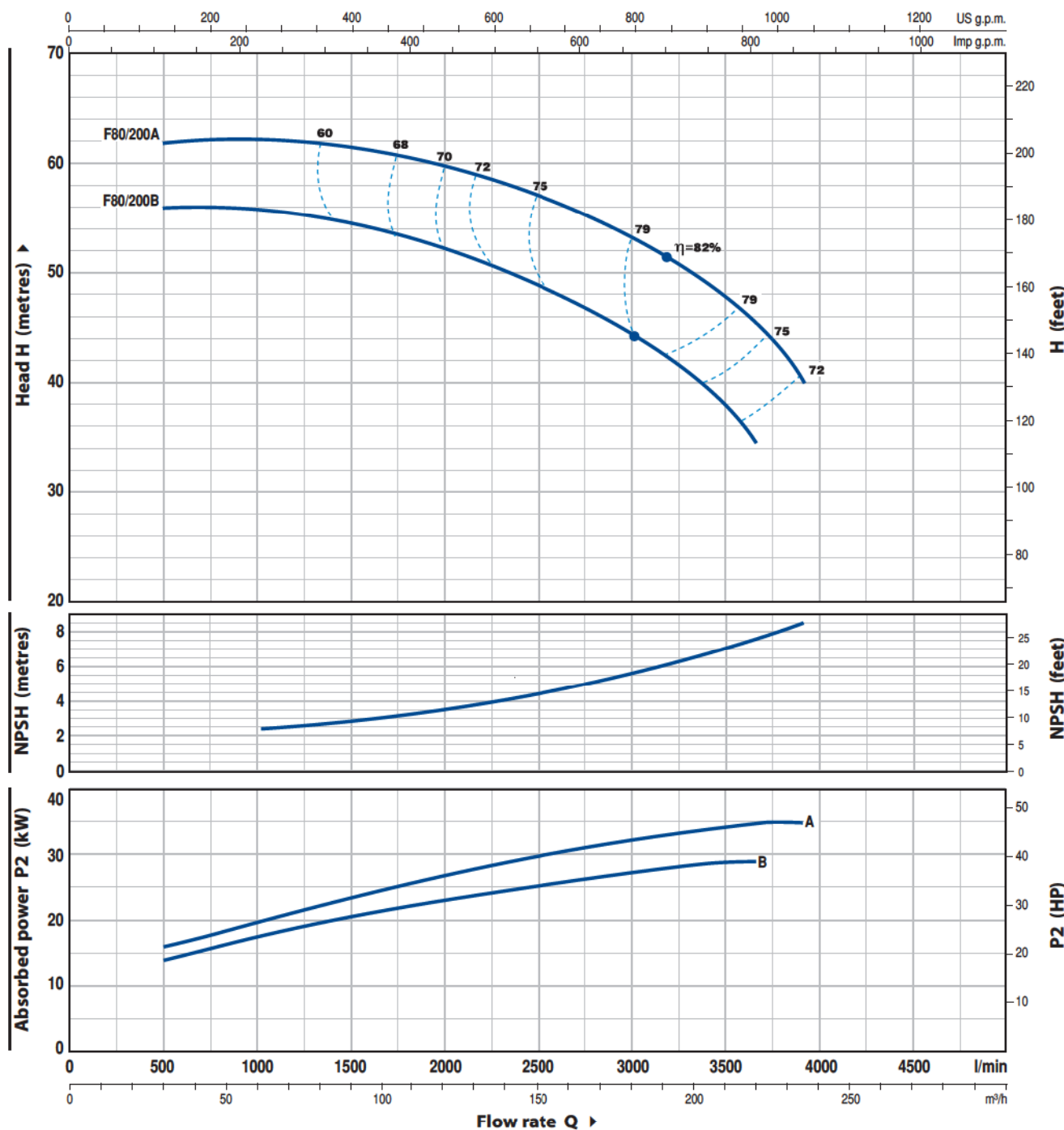
MODEL	POWER		Q	0	30	60	90	120	150	180	210	240
	kW	HP		0	500	1000	1500	2000	2500	3000	3500	4000
F 80/160D	11	15	H metres	25	25	25	24.5	23.5	21	18	14.5	10
F 80/160C	15	20		30	30	30	29.5	28.5	26	23	19.5	15
F 80/160B	18.5	25		35	35	35	34.5	33.5	31	28.5	24.5	20
F 80/160A	22	30		40	40	40	39.5	38.5	36	33	29.5	25

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	m³/h	30	50	100	150	200	219	234
	kW	HP		l/min	500	833	1667	2500	3333	3650	3900
Three-phase			H metres		56	56	54	49	41	34.5	
F 80/200B	30	40			62	62	61	57	50	45.5	40
F 80/200A	37	50									

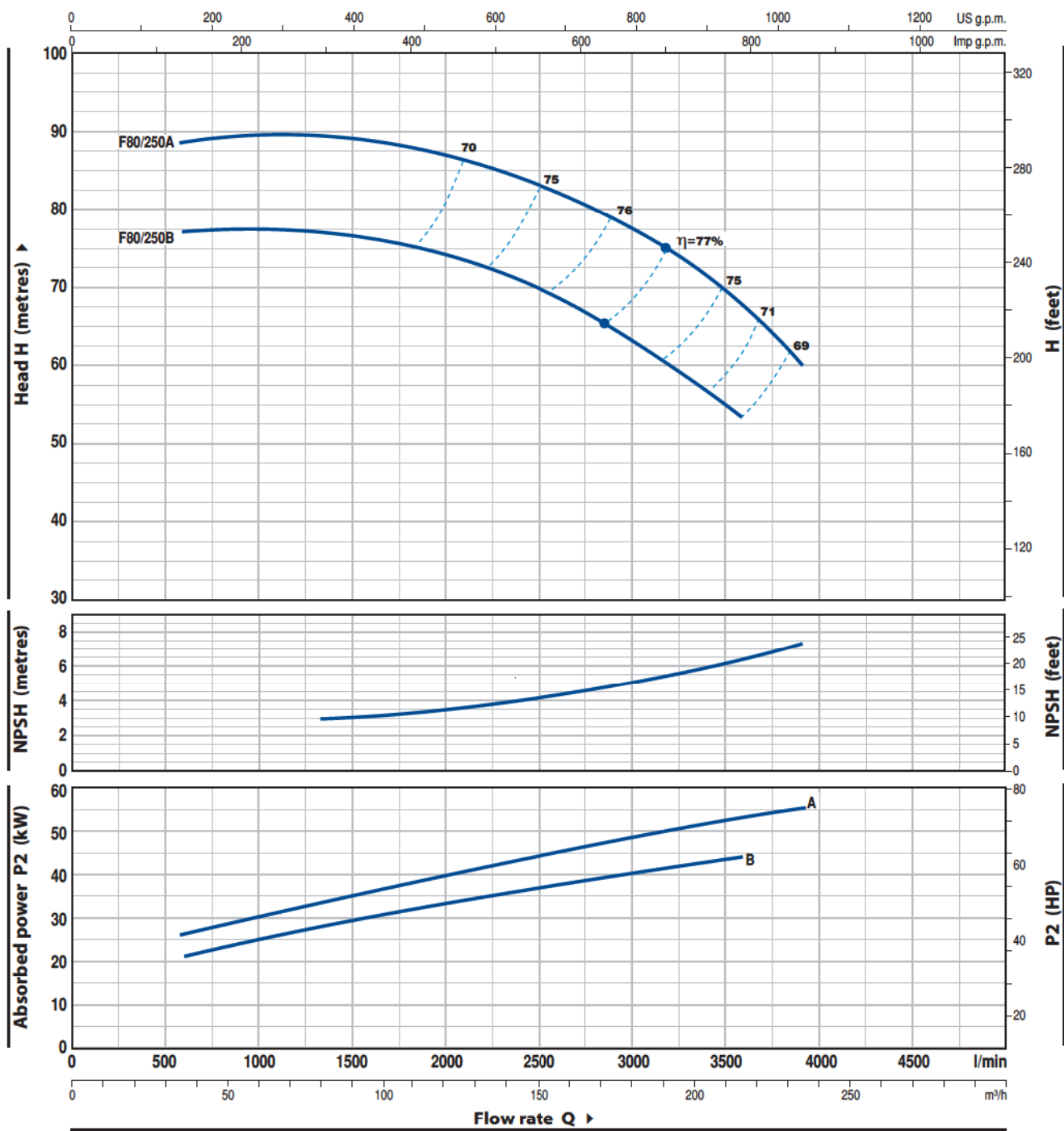
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F80/250

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



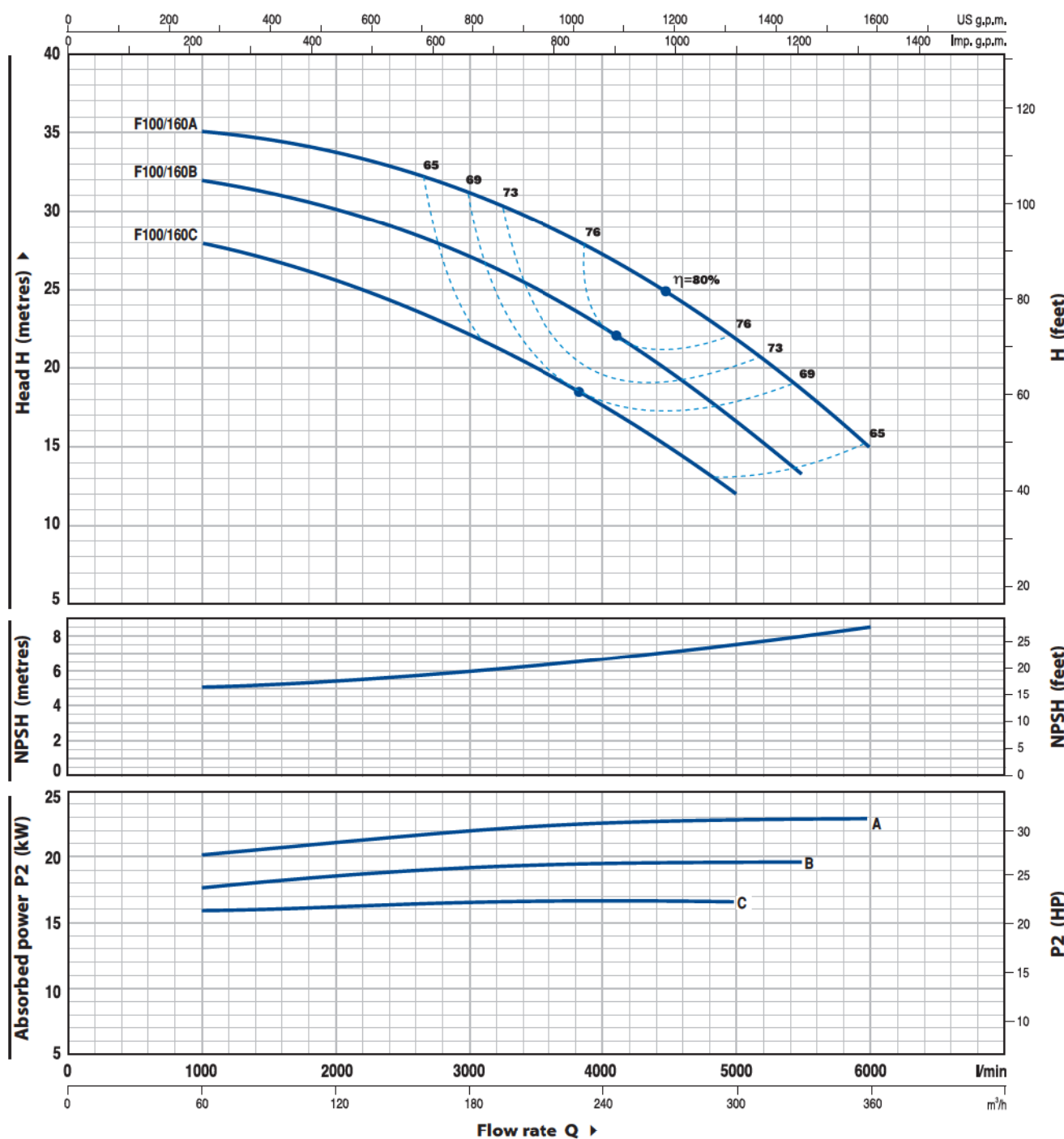
MODEL	POWER		Q	36	50	100	150	200	216	234
	kW	HP		l/min	833	1667	2500	3333	3600	3900
Three-phase			H metres	77	77.5	76	70.5	58.5	54	
F 80/250B	45	60		88.5	89.5	89	83	72	68	60
F 80/250A	55	75								

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL	POWER		Q	0	60	120	180	240	270	300	330	360
	kW	HP		0	1000	2000	3000	4000	4500	5000	5500	6000
Three-phase												
F 100/160C	15	20	H metres	28	28	25.5	22	17.5	15	12		
F 100/160B	18.5	25		32	32	30	27	22.5	19.5	17	13	
F 100/160A	22	30		35	35	34	31	27	24.5	22	18	15

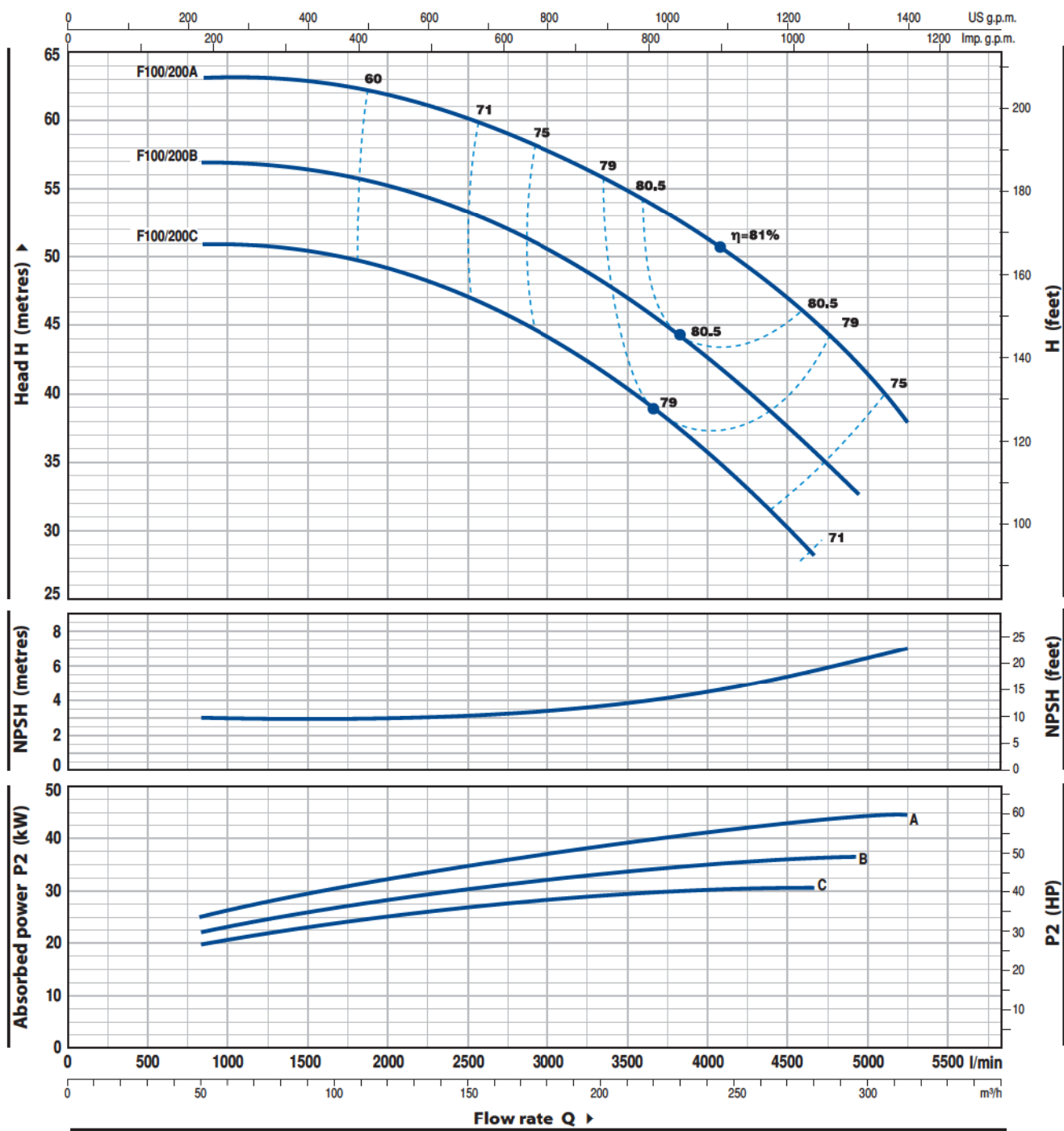
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

F100/200

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



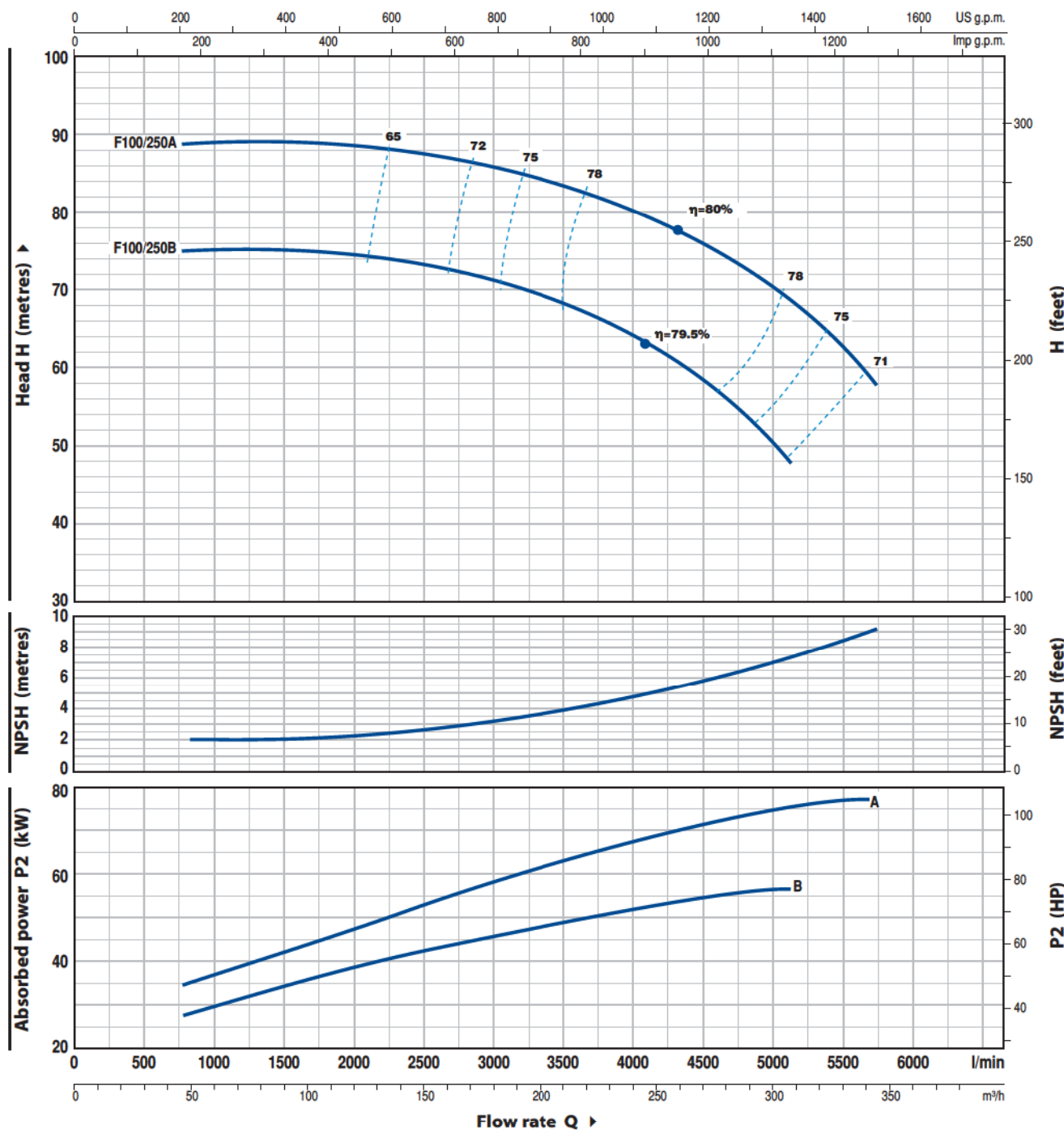
MODEL	POWER		Q	0	50	100	150	200	250	279	294	300	315
	kW	HP		0	833	1667	2500	3333	4167	4650	4900	5000	5250
Three-phase													
F 100/200C	30	40	H metres	51	51	50	47	41.5	34	28			
F 100/200B	37	50		57	57	56	53	48	41	36	33		
F 100/200A	45	60		63	63	62.5	60	56	50	45	42.5	41.5	38

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

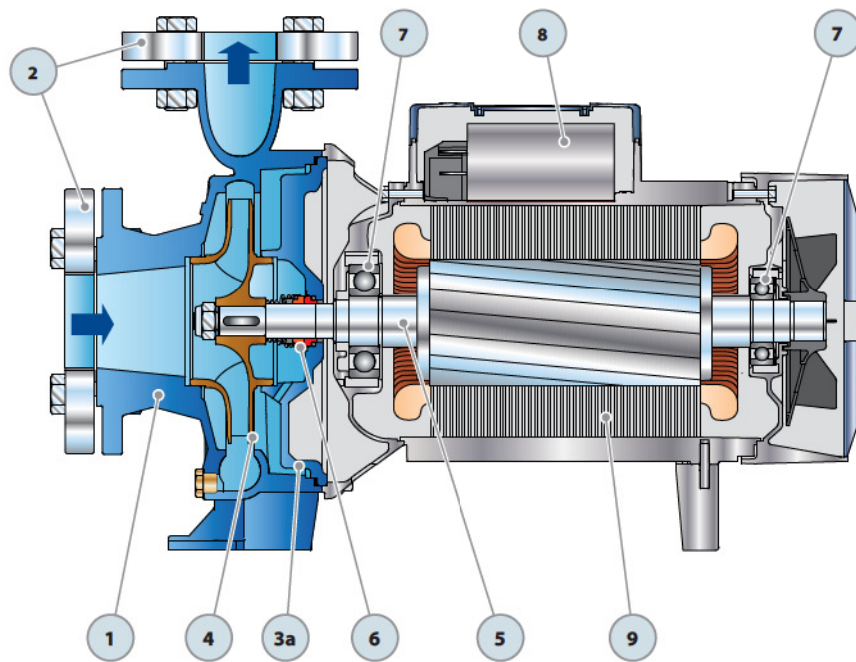


MODEL	POWER		Q	48	96	150	180	210	240	300	309	345
	kW	HP		800	1600	2500	3000	3500	4000	5000	5150	5750
Three-phase												
F 100/250B	55	75	H metres	75	75	74	71.5	69	64.5	51	48	
F 100/250A	75	100		89	89	88.5	87	84	80.5	70.5	69	58

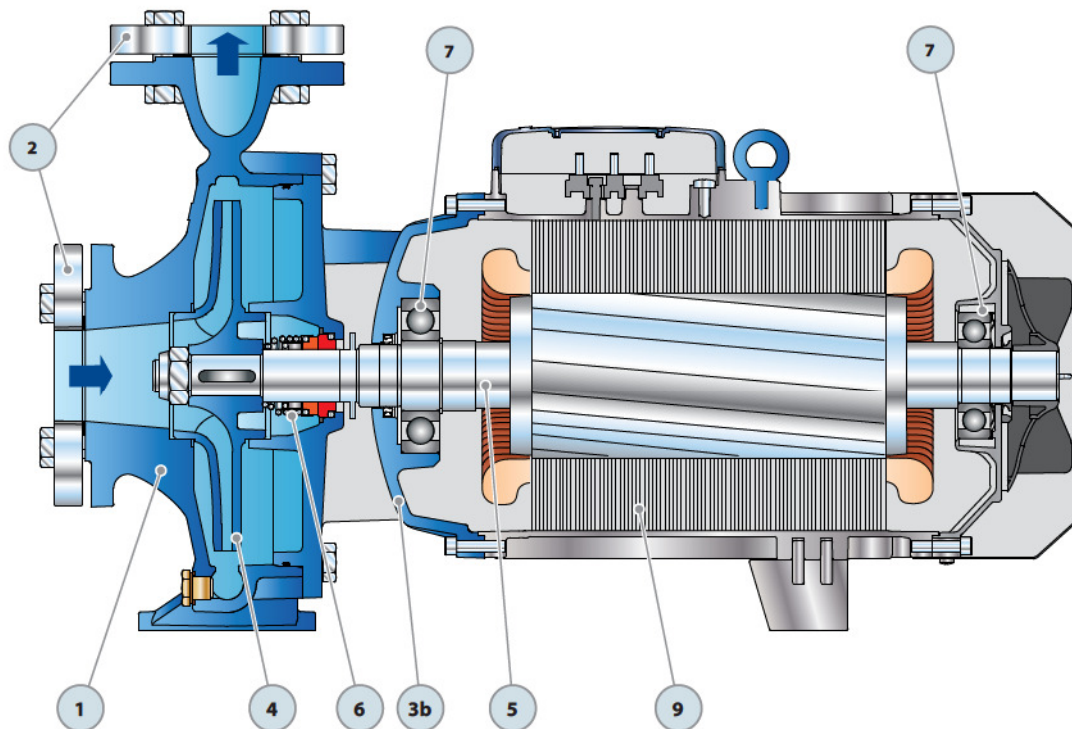
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS. COMPONENT		CONSTRUCTION CHARACTERISTICS						
1	PUMP BODY	Cast iron, complete with flanged suction and delivery ports						
2	COUNTERFLANGES	Steel, complete with ISO 228/1 thread						
3a	BODY BACKPLATE	Cast iron						
3b	MOTOR BRACKET	Cast iron						
4	IMPELLER	Brass for F32/160, F32/200, F40/160, F40/200, F50/125, F50/160 Cast iron for F40/250, F50/200, F50/250, F65/125, F65/160, F65/200, F65/250, F80/160, F80/200, F80/250, F100/160, F100/200, F100/250						
5	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104						
6	MECHANICAL SEAL	Pump Model		Seal Model	Shaft Diameter	<i>Stationary ring</i>	<i>Materials Rotational ring</i>	<i>Elastomer</i>
		F32/160 F50/125	F40/160	FN-20	Ø 20 mm	Graphite	Ceramic	NBR
		F32/200 F50/160	F40/200 F65/125	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
		F50/200 F65/200 F100/160	F65/160 F80/160	FN-32 NU	Ø 32 mm	Graphite	Ceramic	NBR
		F40/250	F50/250	FN-38	Ø 38 mm	Graphite	Ceramic	NBR
		F65/250 F80/250B F80/250A	F80/200 F100/200 F100/250	FN-40 FH-45 NU	Ø 40 mm Ø 45 mm	Graphite	Ceramic	NBR
7	BEARINGS	Pump	Model	Pump		Model		
		Fm32/160C F32/160C F32/160B F40/160C F50/125C	6206 ZZ - C3 / 6204 ZZ	F32/200 F40/200 F50/160 F65/125	6307 ZZ - C3 / 6206 ZZ - C3			
		F40/250 F50/200 F50/250 F65/160 F65/200 F80/160 F100/160						
		Fm32/160B F32/160A Fm40/160C F40/160B Fm50/125C F50/125B	6206 ZZ - C3 / 6205 ZZ	F65/250 F80/200 F80/250B F100/200 F80/250A F100/250	6310 ZZ - C3 / 6308 ZZ - C3 6312 ZZ - C3 / 6212 ZZ - C3 6314 ZZ - C3 / 6314 ZZ - C3			
		F40/160A F50/125A						
8	CAPACITOR	Pump	Capacitance					
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>					
		Fm32/160C	45 µF 450 VL					
		Fm32/160B	70 µF 450 VL					
		Fm40/160C	70 µF 450 VL					
		Fm50/125C	70 µF 450 VL					
9	ELECTRIC MOTOR	Fm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding (up to 1.5 kW) F: three-phase 230/400 V - 50 Hz up to 4 kW 400/690 V - 50 Hz from 5.5 to 75 kW ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class – Protection: IP 55						

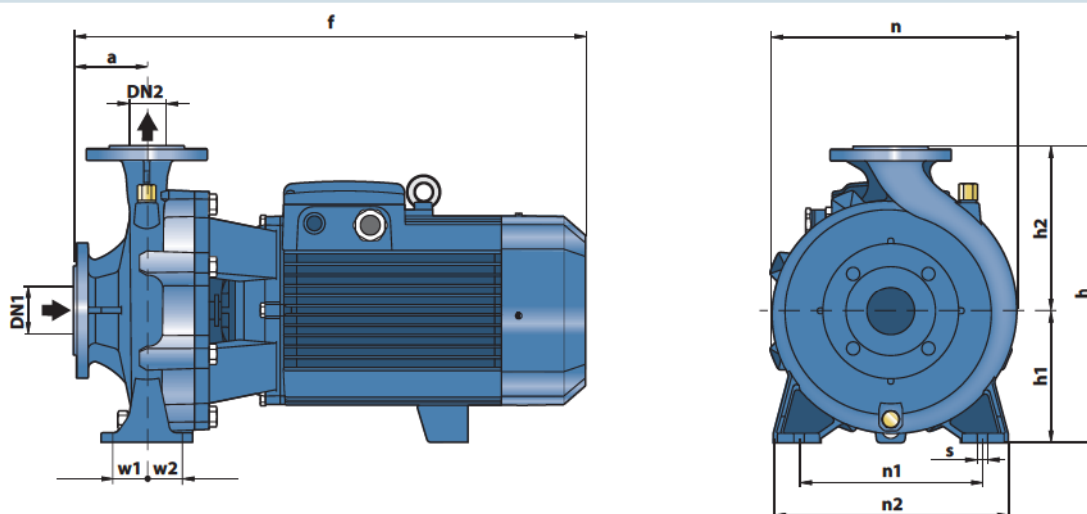


Single-phase version



Three-phase version

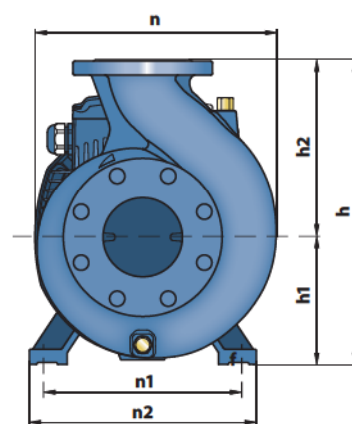
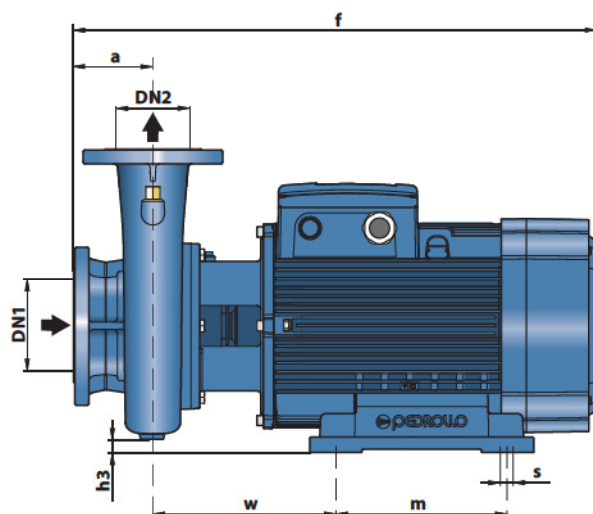
DIMENSIONS AND WEIGHT



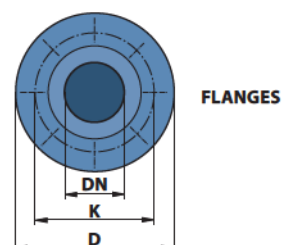
MODEL		PORTS		DIMENSIONS mm											kg *						
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	n	n1	n2	w1	w2	s	1~	3~					
Fm 32/160C	F 32/160C	50	32	80	412	292	132	160	242	190	240	35	35	14	39.2	37.0					
Fm 32/160B	F 32/160B				431										42.6	38.5					
-	F 32/160A				469										-	42.6					
-	F 32/200C				515	340	160	180	270						-	52.0					
-	F 32/200B														-	57.0					
-	F 32/200A														-	61.0					
-	F 32/200BH				469										-	47.9					
-	F 32/200AH				412										-	51.1					
Fm 40/160C	F 40/160C	65	40	80	412	292	132	160	240	212	265	47.5	47.5		43.9	40.0					
-	F 40/160B				431										-	44.0					
-	F 40/160A				465										-	50.1					
-	F 40/200B				535	340	160	180	275						-	61.0					
-	F 40/200A														-	67.0					
-	F 40/250C														606	405	180	225	328		
-	F 40/250B				-	109.0															
-	F 40/250A				701	-	125.0														
Fm 50/125C	F 50/125C	65	50	100	431	292	132	160	242	190	240	35	35		47.5	47.5	44.2	40.1			
-	F 50/125B				450												-	44.1			
-	F 50/125A				484												-	50.7			
-	F 50/160C				489	340	160	180	269								-	55.0			
-	F 50/160B				535												-	60.6			
-	F 50/160A				616												-	64.7			
-	F 50/200C				711	360	160	200	316								-	106.0			
-	F 50/200B				743												-	128.0			
-	F 50/200A				606												-	135.0			
-	F 50/200AR				701	405	180	225	337								-	147.0			
-	F 50/250D																-	106.0			
-	F 50/250C																733	-	113.4		
-	F 50/250B				511	340	160	180	291								-	129.6			
-	F 50/250A				557												-	146.0			
-	F 50/250AR	621	-	155.0																	
-	F 65/125C	80	65	125	511	360	160	200	300	212	280	47.5	47.5		-	62.7					
-	F 65/125B				557										-	66.8					
-	F 65/125A				621										-	74.0					
-	F 65/160C				716	360	200	300							-	100.0					
-	F 65/160B														-	106.5					
-	F 65/160A														-	123.0					
-	F 65/200B				719	405	180	225	340						-	128.0					
-	F 65/200A														-	125.0					
-	F 65/200AR	751	-												153.1						
-	F 80/160D	100	80		125	652	405	180	225	330	250	320	60	60	18	-	111.5				
-	F 80/160C					747										-	126.0				
-	F 80/160B					779										-	143.5				
-	F 80/160A					758										-	153.0				
-	F 100/160C	125	100	125	790	480	200	280	362	280	360	60	60	18	-	139.0					
-	F 100/160B				-										-	153.7					
-	F 100/160A				-										-	165.0					

(*weight includes counterflanges)

DIMENSIONS AND WEIGHT



DN FLANGES	D mm	K mm	HOLES	
			N°	Ø (mm)
32	140	100	4	18
40	150	110		
50	165	125		
65	185	145		
80	200	160	8	18
100	220	180		
125	250	210		

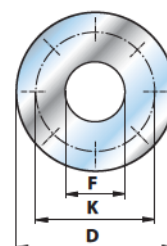


MODEL	PORTS		DIMENSIONS mm												kg *
Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	n2	w	m	s	3~
F 65/250C	80	65	100	796	450	200	250	15	369	318	360	269.5	305	18.5	210.0
F 65/250B				847											230.0
F 65/250A				847											230.0
F 80/200B	100	80	125	824	430	250	280	25	360	400	490	294	350	24	212.0
F 80/200A				875											222.5
F 80/250B				872											480
F 80/250A				1015	620		250	55	490						490
F 100/200C	125	100	140	824	480	200	280	0	391	318	360	269.5	305	18.5	208.5
F 100/200B				875											239.0
F 100/200A				875											240.0
F 100/250B				1036	620										250
F 100/250A			498.5												

(*weight includes counterflanges)

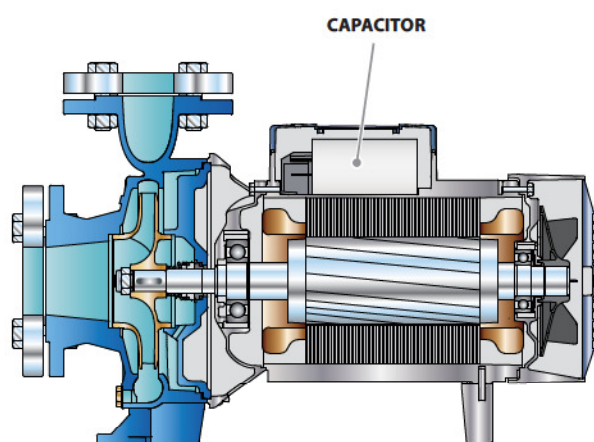
COUNTERFLANGES

DN FLANGES	F COUNTERFLANGES	D mm	K mm	HOLES	
				N°	Ø (mm)
32	1¼"	140	100	4	18
40	1½"	150	110		
50	2"	165	125		
65	2½"	185	145		
80	3"	200	160	8	18
100	4"	220	180		
125	5"	250	210		

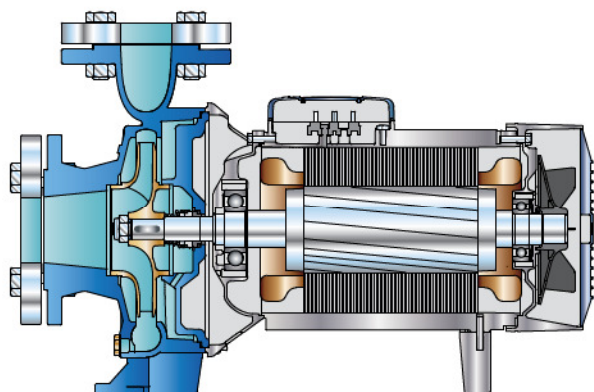


ABSORPTION

MODEL	VOLTAGE (single-phase)	
	230 V	240 V
Single-phase		
Fm 32/160C	11.0 A	10.0 A
Fm 32/160B	15.0 A	13.8 A
Fm 40/160C	15.0 A	13.8 A
Fm 50/125C	15.0 A	13.8 A



Single-phase version

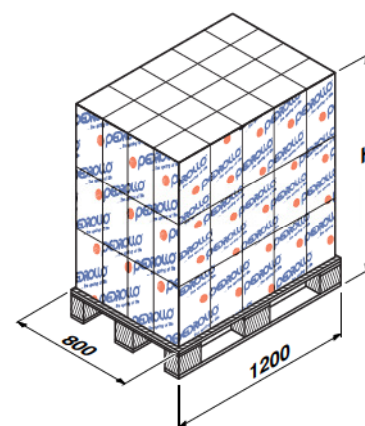


Three-phase version

MODEL	VOLTAGE (three-phase)		
	230÷240 V	400÷415 V	690÷720 V
Three-phase			
F 32/160C	7.5 A	4.3 A	2.5 A
F 32/160B	10.0 A	5.8 A	3.4 A
F 32/160A	12.0 A	7.3 A	4.2 A
F 32/200C	17.9 A	10.3 A	5.9 A
F 32/200B	–	11.7 A	6.7 A
F 32/200A	–	14.9 A	8.6 A
F 32/200BH	12.6 A	7.3 A	4.2 A
F 32/200AH	15.4 A	8.9 A	5.1 A
F 40/160C	9.9 A	5.7 A	3.3 A
F 40/160B	12.0 A	6.9 A	4.0 A
F 40/160A	17.2 A	9.9 A	5.7 A
F 40/200B	–	12.6 A	7.3 A
F 40/200A	–	15.6 A	9.0 A
F 40/250C	–	21.0 A	12.1 A
F 40/250B	–	23.5 A	13.6 A
F 40/250A	–	30.5 A	17.6 A
F 50/125C	9.4 A	5.4 A	3.1 A
F 50/125B	12.0 A	6.9 A	4.0 A
F 50/125A	16.3 A	9.4 A	5.4 A
F 50/160C	15.8 A	9.1 A	5.3 A
F 50/160B	–	12.3 A	7.1 A
F 50/160A	–	15.5 A	8.9 A
F 50/200C	–	23 A	13.3 A
F 50/200B	–	29.5 A	17 A
F 50/200A	–	34.5 A	20 A
F 50/200AR	–	41.5 A	24 A
F 50/250D	–	17.2 A	9.9 A
F 50/250C	–	21.0 A	12.0 A
F 50/250B	–	27.0 A	15.6 A
F 50/250A	–	34.0 A	19.6 A
F 50/250AR	–	41.0 A	24.0 A
F 65/125C	17.5 A	10.0 A	5.8 A
F 65/125B	–	12.0 A	7.0 A
F 65/125A	–	16.5 A	9.5 A
F 65/160C	–	19.0 A	11.0 A
F 65/160B	–	23.0 A	13.5 A
F 65/160A	–	27.5 A	16.0 A
F 65/200B	–	30.0 A	17.3 A
F 65/200A	–	35.0 A	20.2 A
F 65/200AR	–	41.0 A	24.0 A
F 65/250C	–	53.0 A	31.0 A
F 65/250B	–	65.0 A	38.0 A
F 65/250A	–	79.0 A	46.0 A
F 80/160D	–	22.0 A	13.0 A
F 80/160C	–	29.0 A	17.0 A
F 80/160B	–	34.5 A	20.0 A
F 80/160A	–	39.0 A	22.5 A
F 80/200B	–	53.0 A	31.0 A
F 80/200A	–	65.0 A	38.0 A
F 80/250B	–	79.0 A	46.0 A
F 80/250A	–	98.0 A	57.0 A
F 100/160C	–	31.0 A	18.0 A
F 100/160B	–	36.0 A	21.0 A
F 100/160A	–	42.0 A	24.0 A
F 100/200C	–	53.0 A	31.0 A
F 100/200B	–	65.0 A	38.0 A
F 100/200A	–	79.0 A	46.0 A
F 100/250B	–	98.0 A	57.0 A
F 100/250A	–	126.0A	73.0 A

PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
Fm 32/160C	F 32/160C	18	1430	730	683	24	1860	967	905
Fm 32/160B	F 32/160B	18	1430	781	707	24	1860	1036	936
-	F 32/160A	18	1430	-	784	24	1860	-	1040
-	F 32/200C	12	1535	-	641	16	2000	-	849
-	F 32/200B	12	1535	-	701	16	2000	-	929
-	F 32/200A	12	1535	-	749	16	2000	-	993
-	F 32/200BH	12	1535	-	591	16	2000	-	783
-	F 32/200AH	12	1535	-	629	16	2000	-	833
Fm 40/160C	-	12	1400	509	-	16	1820	673	-
-	F 40/160C	18	1430	-	735	24	1860	-	975
-	F 40/160B	18	1430	-	809	24	1860	-	1073
-	F 40/160A	12	1400	-	617	16	1820	-	817
-	F 40/200B	12	1535	-	749	16	2000	-	993
-	F 40/200A	12	1535	-	821	16	2000	-	1089
-	F 40/250C	6	1200	-	635	9	1730	-	944
-	F 40/250B	6	1200	-	671	9	1730	-	998
-	F 40/250A	6	1200	-	767	9	1730	-	1142
Fm 50/125C	-	18	1430	820	-	24	1860	1088	-
-	F 50/125C	12	1400	-	498	16	1820	-	659
-	F 50/125B	18	1430	-	810	24	1860	-	1075
-	F 50/125A	12	1535	-	625	16	2000	-	828
-	F 50/160C	12	1535	-	677	16	2000	-	897
-	F 50/160B	12	1535	-	744	16	2000	-	987
-	F 50/160A	12	1535	-	793	16	2000	-	1052
-	F 50/200C	6	1200	-	653	9	1730	-	971
-	F 50/200B	6	1200	-	785	9	1730	-	1169
-	F 50/200A	6	1200	-	827	9	1730	-	1232
-	F 50/200AR	6	1380	-	899	9	2000	-	1340
-	F 50/250D	6	1200	-	653	9	1730	-	971
-	F 50/250C	6	1200	-	697	9	1730	-	1037
-	F 50/250B	6	1200	-	794	9	1730	-	1183
-	F 50/250A	6	1200	-	893	9	1730	-	1331
-	F 50/250AR	6	1380	-	947	9	2000	-	1412
-	F 65/125C	12	1535	-	769	16	2000	-	1020
-	F 65/125B	12	1535	-	818	16	2000	-	1085
-	F 65/125A	12	1535	-	905	16	2000	-	1201
-	F 65/160C	6	1200	-	617	9	1730	-	917
-	F 65/160B	6	1200	-	656	9	1730	-	976
-	F 65/160A	6	1200	-	755	9	1730	-	1018
-	F 65/200B	6	1200	-	785	9	1730	-	1169
-	F 65/200A	6	1200	-	767	9	1730	-	1142
-	F 65/200AR	6	1380	-	936	9	2000	-	1395
-	F 65/250C	1	450	-	227	-	-	-	-
-	F 65/250B	1	450	-	247	-	-	-	-
-	F 65/250A	1	450	-	247	-	-	-	-
-	F 80/160D	6	1200	-	686	9	1730	-	1021
-	F 80/160C	6	1380	-	773	9	2000	-	1151
-	F 80/160B	6	1380	-	878	9	2000	-	1309
-	F 80/160A	6	1380	-	935	9	2000	-	1394
-	F 80/200B	1	450	-	229	-	-	-	-
-	F 80/200A	1	450	-	240	-	-	-	-
-	F 80/250B	1	450	-	262	-	-	-	-
-	F 80/250A	1	770	-	514	-	-	-	-
-	F 100/160C	6	1380	-	851	9	2000	-	1256
-	F 100/160B	6	1380	-	939	9	2000	-	1437
-	F 100/160A	6	1380	-	1007	9	2000	-	1502
-	F 100/200C	1	450	-	226	-	-	-	-
-	F 100/200B	1	450	-	256	-	-	-	-
-	F 100/200A	1	450	-	257	-	-	-	-
-	F 100/250B	1	770	-	516	-	-	-	-
-	F 100/250A	1	770	-	516	-	-	-	-





PERFORMANCE RANGE

- Flow rate up to **2200 l/min** (132 m³/h)
- Head up to **38 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. pressure in pump body **10 bar** (PN10)
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



Pump body dimensions in compliance with: **EN 733**

CERTIFICATIONS



AN30



VspTECT-003

INSTALLATION AND USE

- Water supply
- Pressure boosting
- Irrigation
- Water circulation in climatisation sets
- Cleaning sets
- Firefighting sets
- Industrial applications
- Agricultural applications

Suitable for use with clean, aggressive liquids that are chemically compatible with the materials from which the pump is made.

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

OPTIONALS AVAILABLE ON REQUEST

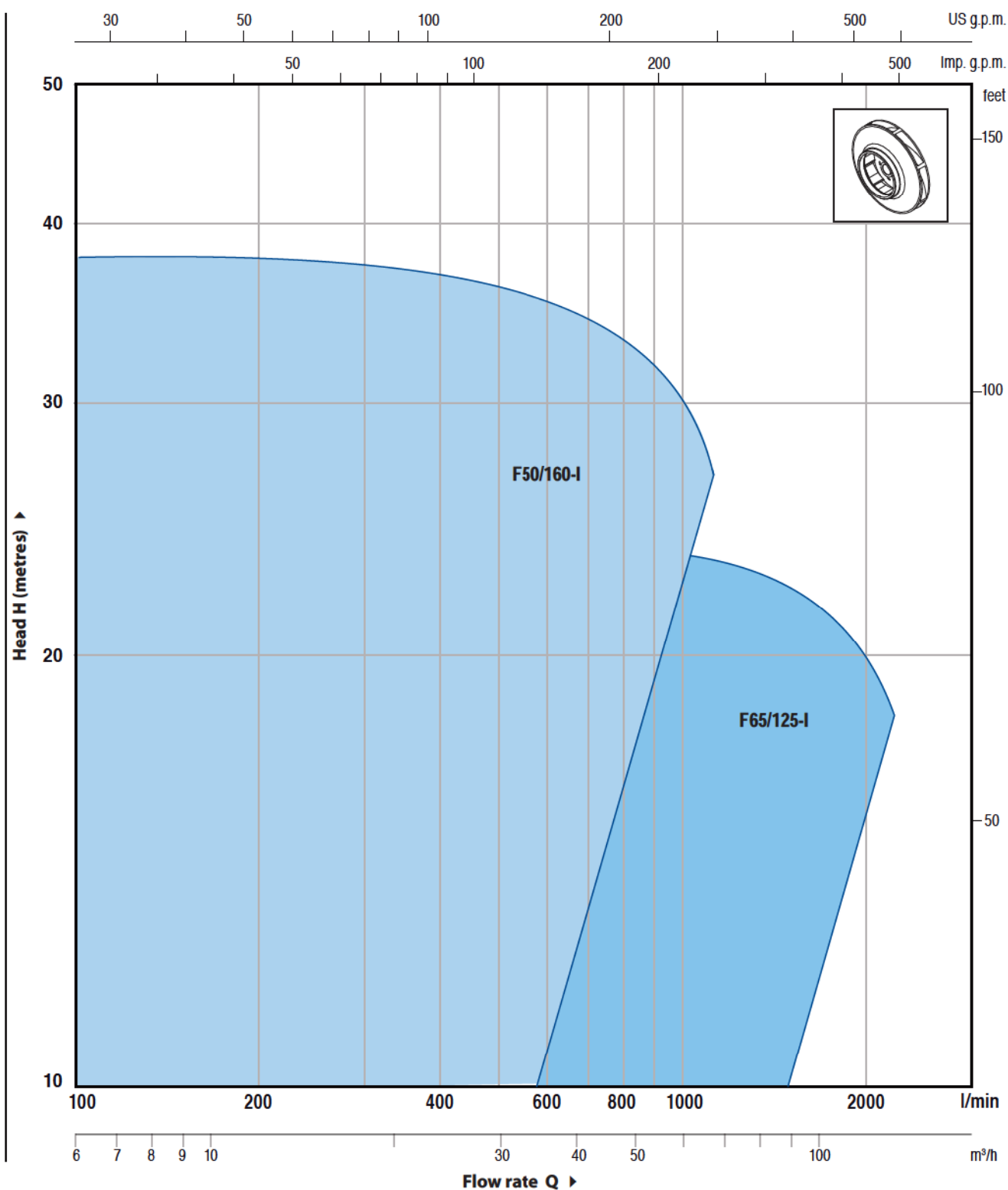
- Special mechanical seal
- Other voltages or 60 Hz frequency
- Compatibility with hotter or colder liquids
- Compatibility with hotter or colder ambients

GUARANTEE

2 years subject to terms and conditions

PERFORMANCE RANGE

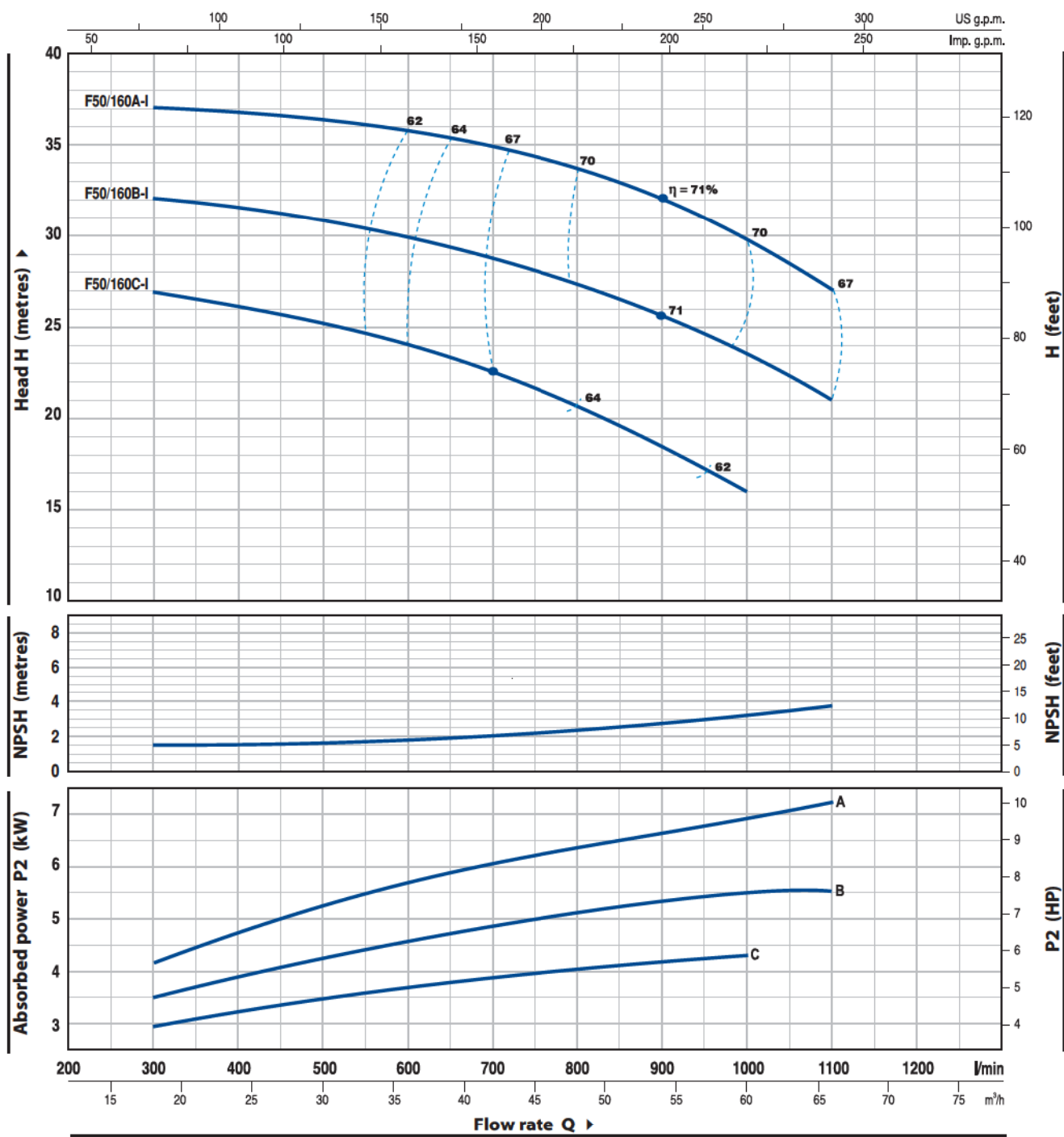
50 Hz n= 2900 1/min HS= 0 m



F50/160-I

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



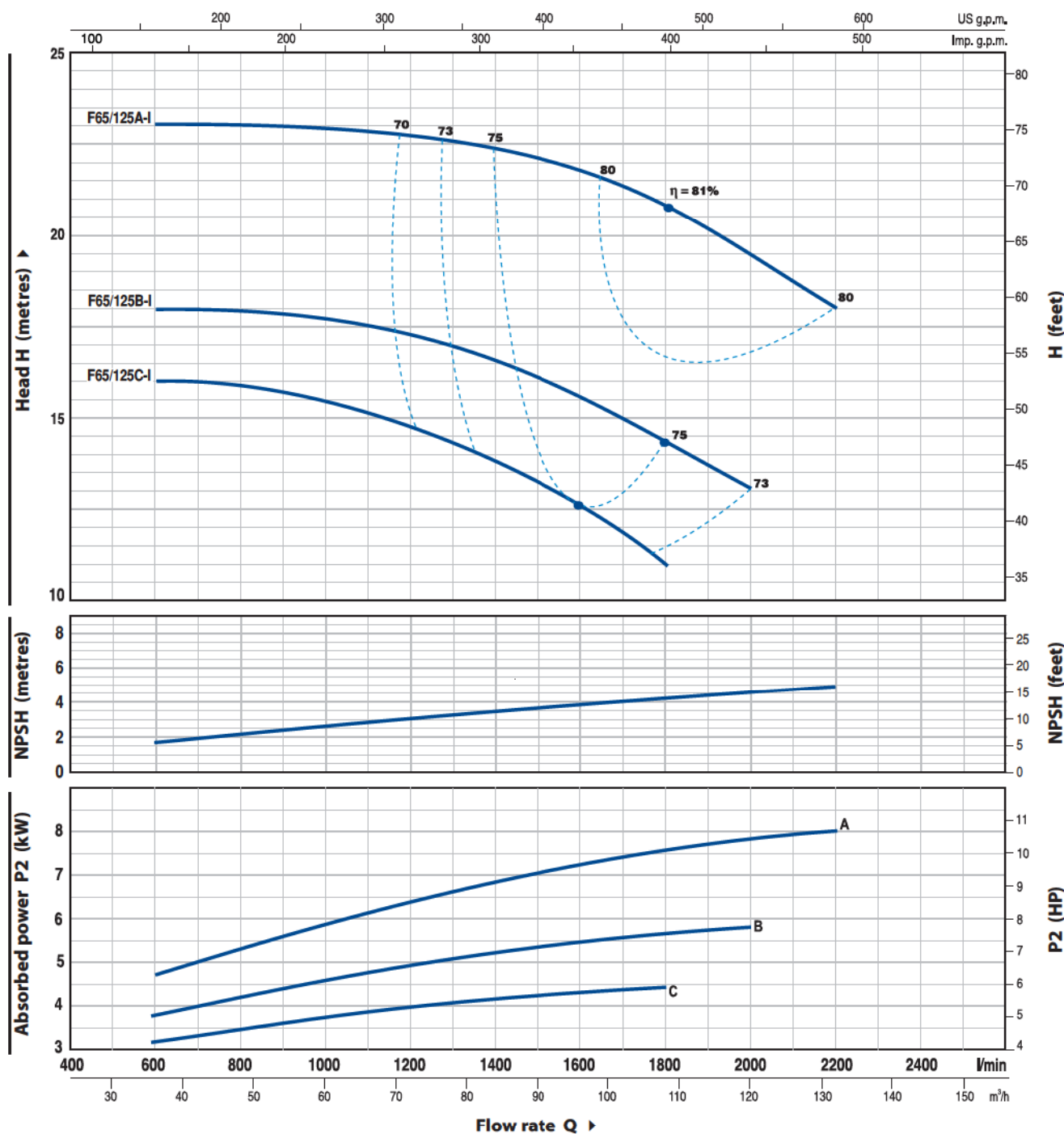
MODEL	POWER		Q	0	18	24	30	36	42	48	54	60	66
	kW	HP		0	300	400	500	600	700	800	900	1000	1100
F 50/160C-I	4	5.5	H metres	27	27	26.5	25	24.5	23	20	18.5	16	
F 50/160B-I	5.5	7.5		33	32	31.7	31	30	29	27	26	24	21
F 50/160A-I	7.5	10		38	37	36.8	36.5	36	34	33	32	30	27

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

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

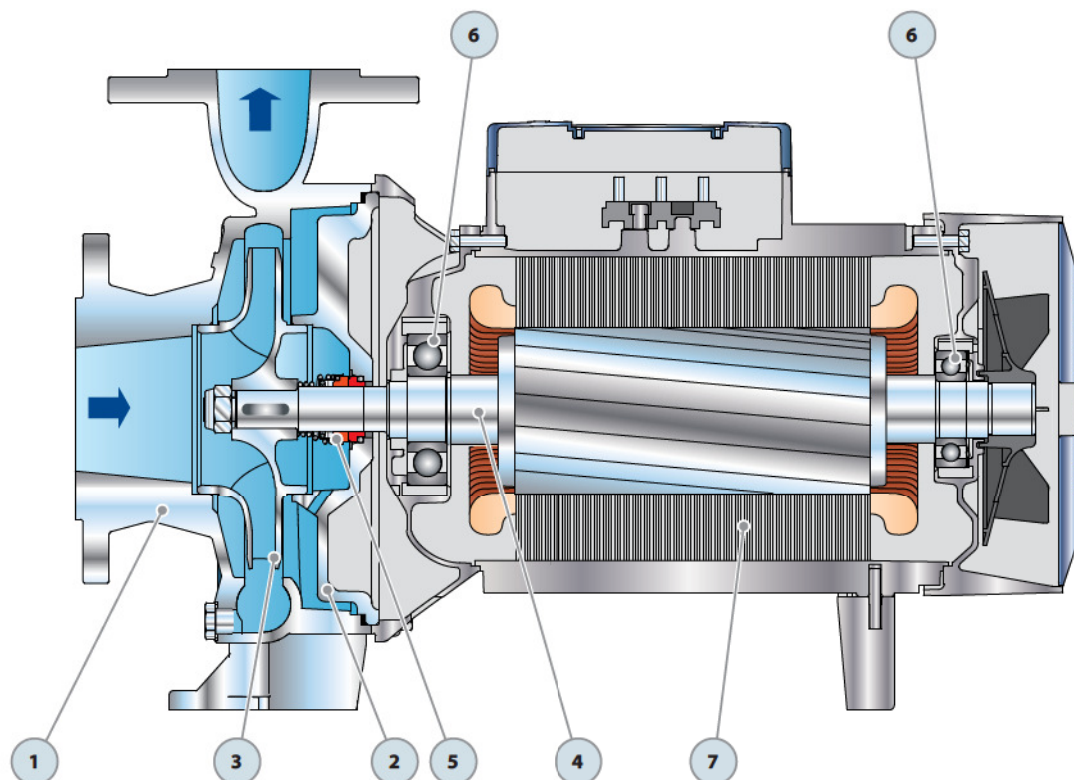


MODEL	POWER		Q	0	36	48	60	72	84	96	108	120	132
	kW	HP		0	600	800	1000	1200	1400	1600	1800	2000	2200
Three-phase													
F 65/125C-I	4	5.5	H metres	16	16	16	15.5	14.5	13.5	12.5	11		
F 65/125B-I	5.5	7.5		18	18	18	18	17	16.5	15.5	14.5	13	
F 65/125A-I	7.5	10		23	23	23	23	22.5	22.5	22	21	19.5	18

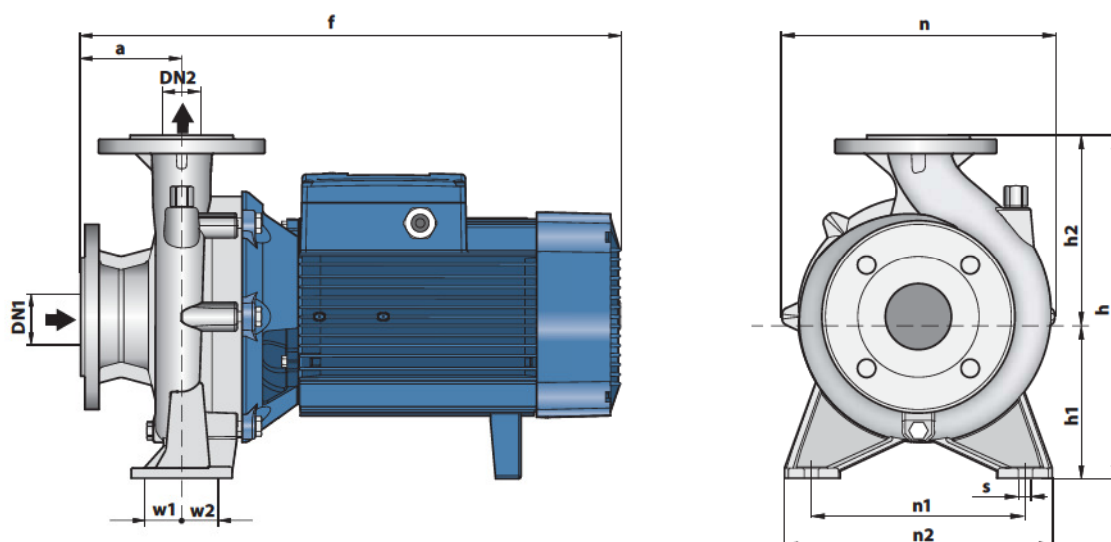
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS					
1	PUMP BODY	Stainless steel AISI 316, complete with flanged suction and delivery ports					
2	BODY BACKPLATE	Stainless steel AISI 316					
4	IMPELLER	Stainless steel AISI 316					
5	MOTOR SHAFT	Stainless steel AISI 316					
6	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>
		F50/160-I F65/125-I	FN-24SV	Ø 24 mm	Silicon carbide	Silicon carbide	Viton
7	BEARINGS	<i>Pump</i>	<i>Model</i>				
		F50/160-I F65/125-I	6307 ZZ - C3 / 6206 ZZ - C3				
9	ELECTRIC MOTOR	F: three-phase 230/400 V - 50 Hz for 4 kW. 400/690 V - 50 Hz from 5.5 to 7.5 kW. ⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance – Insulation: F class. – Protection: IP 55.					



DIMENSIONS AND WEIGHT



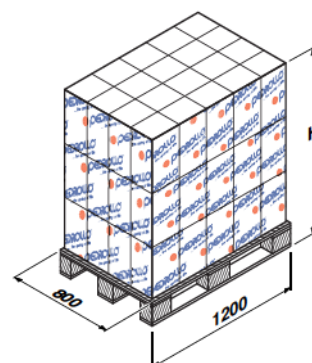
MODEL	PORTS		DIMENSIONS mm											Kg
Three-phase	DN1	DN2	a	f	h	h1	h2	n	n1	n2	w1	w2	s	3~
F 50/160C-I	65	50	100	489	340	160	180	269	212	265	35	35	14	50.2
F 50/160B-I				535										54.0
F 50/160A-I				511										65.5
F 65/125C-I	80	65		557				291		280	47.5	47.5		62.6
F 65/125B-I				67.7										
F 65/125A-I				72.9										

ABSORPTION

MODEL	VOLTAGE (three-phase)		
Three-phase	230÷240 V	400÷415 V	690÷720 V
F 50/160C-I	15.8 A	9.1 A	5.3 A
F 50/160B-I	-	12.3 A	7.1 A
F 50/160A-I	-	15.5 A	8.9 A
F 65/125C-I	17.5 A	10.0 A	5.8 A
F 65/125B-I	-	12.0 A	7.0 A
F 65/125A-I	-	16.5 A	9.5 A

PALLETIZATION

MODEL	GROUPAGE			CONTAINER		
Threw	n° pumps	H (mm)	kg 3~	n° pumps	H (mm)	kg 3~
F 50/160C-I	12	1535	619	16	2000	820
F 50/160B-I	12	1535	665	16	2000	881
F 50/160A-I	12	1535	802	16	2000	1064
F 65/125C-I	12	1535	768	16	2000	1018
F 65/125B-I	12	1535	829	16	2000	1100
F 65/125A-I	12	1535	891	16	2000	1183





PERFORMANCE RANGE

- Flow rate up to **6000 l/min** (360 m³/h)
- Head up to **95 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Max. pressure in pump body **10 bar** (PN10)

CONSTRUCTION AND SAFETY STANDARDS

EN 733



CERTIFICATIONS



INSTALLATION AND USE

- Water supply
- Pressure boosting
- Irrigation
- Water circulation in climatisation sets
- Cleaning sets
- Firefighting sets
- Industrial applications
- Agricultural applications

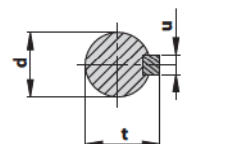
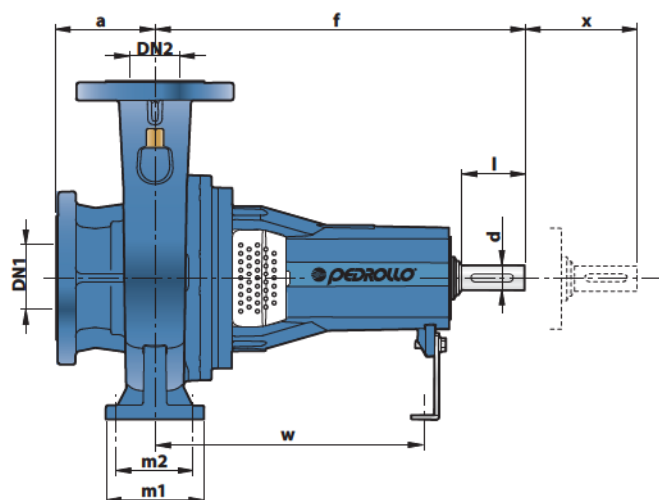
OPTIONALS AVAILABLE ON REQUEST

- Special mechanical seal
- Counterflange
- Pumps compatible with 60 Hz motors
- Compatibility with hotter or colder liquids
- Compatibility with hotter or colder ambients

GUARANTEE

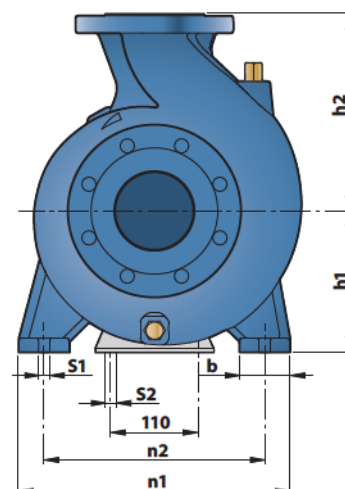
2 years subject to terms and conditions

DIMENSIONS AND WEIGHT

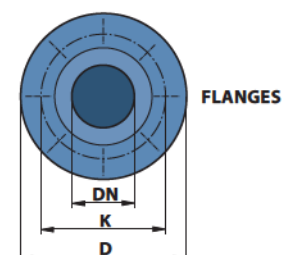


SHAFT DIMENSIONS

mm		
d	u	t
24 k6	8	27
32 k6	10	35



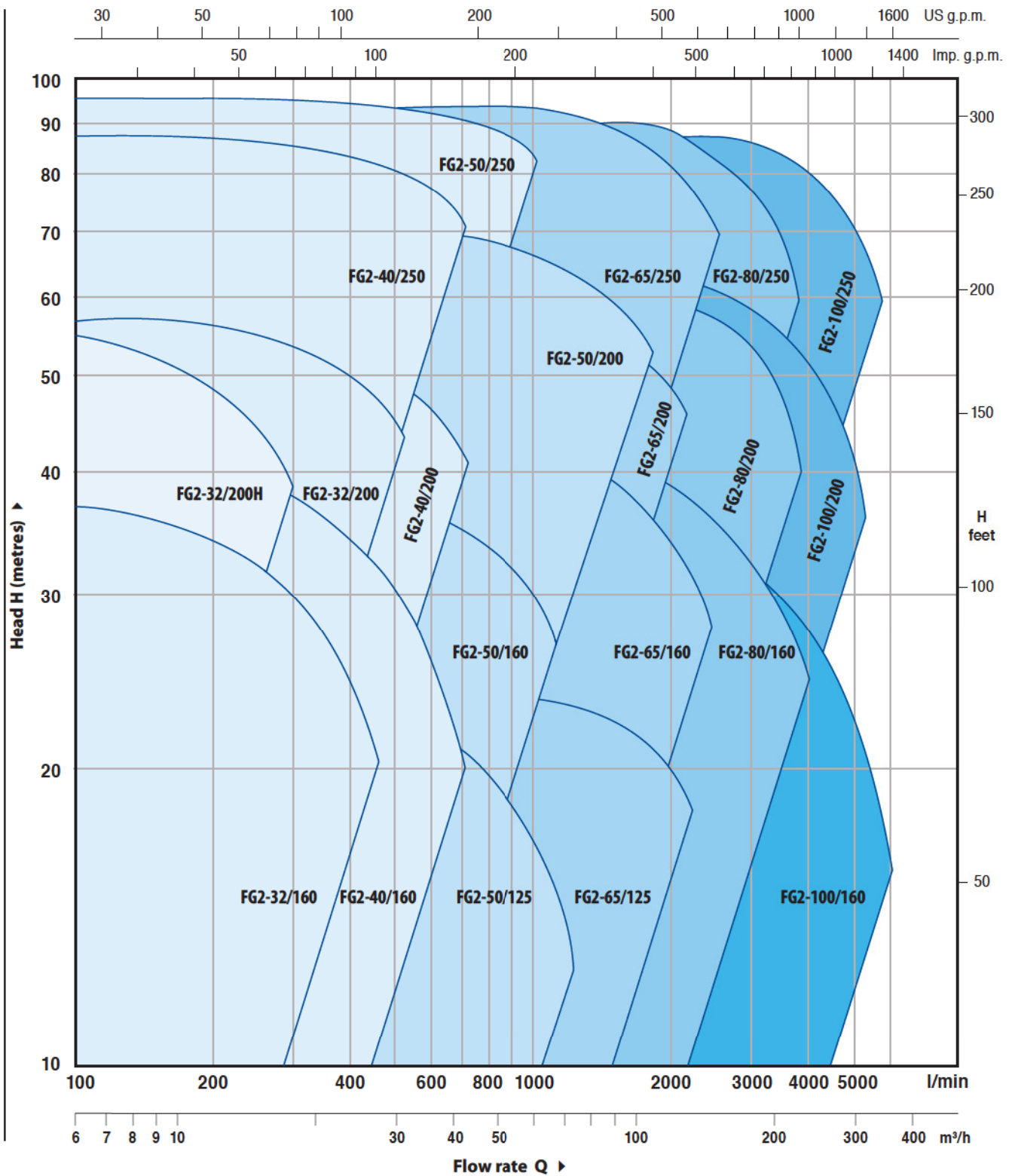
DN FLANGES	D mm	K mm	HOLES	
			N°	Ø (mm)
32	140	100	4	18
40	150	110		
50	165	125		
65	185	145		
80	200	160	8	18
100	220	180		
125	250	210		



MODEL	PORTS		DIMENSIONS mm														kg								
	DN1	DN2	a	f	h1	h2	b	m1	m2	n1	n2	s1	s2	w	x	d		l							
FG 32/160	50	32	80	360	132	160	50	100	70	240	190	14	14	260	100	24	50	30.9							
FG 32/200					160	180	55	95		245								32.0							
FG 32/200H					160	180	55											31.4							
FG 40/160	65	40	100	360	132	160	50	100	70	240		14	14	260	100	24	50	29.0							
FG 40/200					160	180	55			265	212							35.6							
FG 40/250					180	225	65	125		95	320							250	44.4						
FG 50/125	65	50	100	360	132	160	50	100	70	240	190	14	14	260	100	24	50	28.9							
FG 50/160					160	180	55			265	212							32.8							
FG 50/200					160	200	50											41.3							
FG 50/250	80	65	100	360	180	225	65	125	95	320	250	14	14	260	100	24	50	46.6							
FG 65/125					160	180	65				280							212	40.1						
FG 65/160					160	200	65												41.4						
FG 65/200	80	65	100	360	180	225	65	125	95	320	250	14	14	260	100	24	50	46.5							
FG 65/250					470	200	250			80	160							120	360	280	18	340	32	80	67.7
FG 80/160					360	180	225			65	125							95	320	250	14	260	24	50	45.2
FG 80/200	100	80	125	470	180	250	65	160	120	345	280	18	18	340	140	32	80	61.4							
FG 80/250					200	280	80				400							315	76.8						
FG 100/160					360	200	280			80										52.8					
FG 100/200	125	100	140	470	200	280	80	160	120	360	280	18	18	340	140	32	80	74.3							
FG 100/250					225	280	80				400							315	84.0						

PERFORMANCE RANGE

HS= 0 m



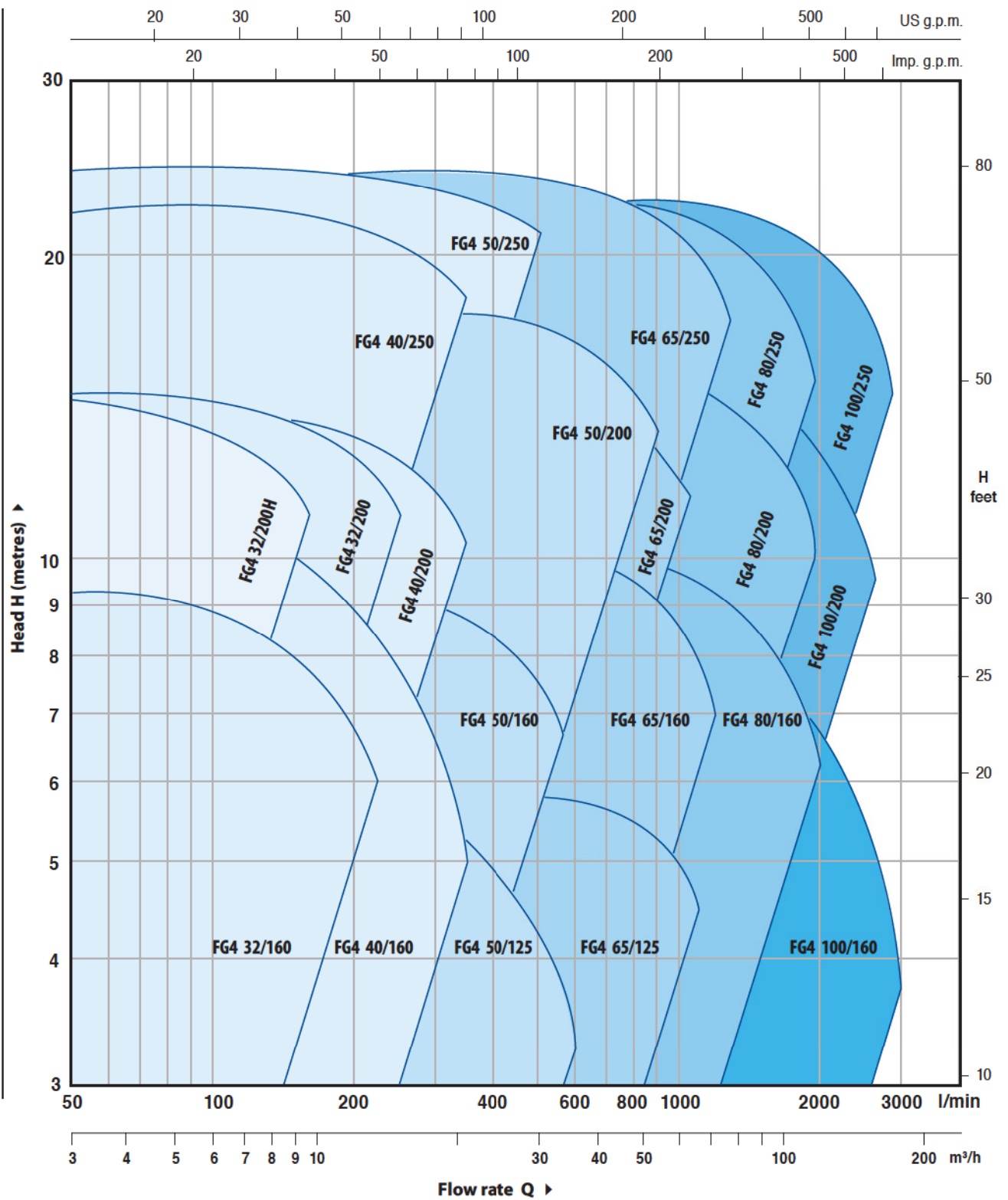
PERFORMANCE DATA

n= 2900 1/min HS= 0 m

MODEL pump	MOTOR PAIRING		PERFORMANCE	
	kW	HP	Q l/min	H metres
FG2 32/160C	1.5	2	100 ÷ 350	24 ÷ 14
FG2 32/160B	2.2	3	100 ÷ 400	30 ÷ 17
FG2 32/160A	3	4	100 ÷ 450	37 ÷ 24
FG2 32/200C	4	5.5	100 ÷ 450	44 ÷ 31.5
FG2 32/200B	5.5	7.5	100 ÷ 500	51 ÷ 36
FG2 32/200A	7.5	10	100 ÷ 500	57 ÷ 44
FG2 32/200BH	3	4	100 ÷ 300	45 ÷ 37
FG2 32/200AH	4	5.5	100 ÷ 320	55 ÷ 44
FG2 40/160C	2.2	3	100 ÷ 600	27 ÷ 14
FG2 40/160B	3	4	100 ÷ 600	32 ÷ 20
FG2 40/160A	4	5.5	100 ÷ 700	38 ÷ 20
FG2 40/200B	5.5	7.5	100 ÷ 700	47 ÷ 28
FG2 40/200A	7.5	10	100 ÷ 700	55 ÷ 41
FG2 40/250C	9.2	12.5	100 ÷ 700	64 ÷ 47
FG2 40/250B	11	15	100 ÷ 700	71 ÷ 55
FG2 40/250A	15	20	100 ÷ 700	88 ÷ 72
FG2 50/125C	2.2	3	300 ÷ 1200	17.5 ÷ 6
FG2 50/125B	3	4	300 ÷ 1200	20.7 ÷ 9
FG2 50/125A	4	5.5	300 ÷ 1200	23.5 ÷ 13
FG2 50/160C	4	5.5	300 ÷ 1000	27 ÷ 16
FG2 50/160B	5.5	7.5	300 ÷ 1100	32 ÷ 21
FG2 50/160A	7.5	10	300 ÷ 1100	37 ÷ 27
FG2 50/200C	11	15	400 ÷ 1700	44 ÷ 30
FG2 50/200B	15	20	400 ÷ 1700	52 ÷ 38
FG2 50/200A	18.5	25	400 ÷ 1800	61 ÷ 45
FG2 50/200AR	22	30	400 ÷ 1800	69 ÷ 53
FG2 50/250D	9.2	12.5	300 ÷ 900	51 ÷ 32
FG2 50/250C	11	15	300 ÷ 900	59 ÷ 42
FG2 50/250B	15	20	300 ÷ 1000	72 ÷ 59
FG2 50/250A	18.5	25	300 ÷ 1000	85 ÷ 73
FG2 50/250AR	22	30	300 ÷ 1000	95 ÷ 83
FG2 65/125C	4	5.5	600 ÷ 1800	16 ÷ 11
FG2 65/125B	5.5	7.5	600 ÷ 2000	18 ÷ 13
FG2 65/125A	7.5	10	600 ÷ 2200	23 ÷ 18
FG2 65/160C	9.2	12.5	600 ÷ 2200	32 ÷ 22
FG2 65/160B	11	15	600 ÷ 2400	36.5 ÷ 23
FG2 65/160A	15	20	600 ÷ 2400	40.5 ÷ 28
FG2 65/200B	15	20	400 ÷ 2000	45 ÷ 35.5
FG2 65/200A	18.5	25	400 ÷ 2100	51 ÷ 40
FG2 65/200AR	22	30	400 ÷ 2100	57 ÷ 46
FG2 65/250C	30	40	400 ÷ 2350	76 ÷ 53
FG2 65/250B	37	50	400 ÷ 2500	87 ÷ 62
FG2 65/250A	45	60	400 ÷ 2600	94.5 ÷ 68

MODEL pump	MOTOR PAIRING		PERFORMANCE	
	kW	HP	Q l/min	H metres
FG2 80/160D	11	15	500 ÷ 4000	25 ÷ 10
FG2 80/160C	15	20	500 ÷ 4000	30 ÷ 15
FG2 80/160B	18.5	25	500 ÷ 4000	35 ÷ 20
FG2 80/160A	22	30	500 ÷ 4000	40 ÷ 25
FG2 80/200B	30	40	500 ÷ 3650	56 ÷ 34.5
FG2 80/200A	37	50	500 ÷ 3900	62 ÷ 40
FG2 80/250B	45	60	600 ÷ 3600	77 ÷ 54
FG2 80/250A	55	75	600 ÷ 3900	88.5 ÷ 60
FG2 100/160C	15	20	1000 ÷ 5000	28 ÷ 12
FG2 100/160B	18.5	25	1000 ÷ 5500	32 ÷ 13
FG2 100/160A	22	30	1000 ÷ 6000	35 ÷ 15
FG2 100/200C	30	40	800 ÷ 4650	51 ÷ 28
FG2 100/200B	37	50	800 ÷ 4900	57 ÷ 33
FG2 100/200A	45	60	800 ÷ 5250	63 ÷ 38
FG2 100/250B	55	75	800 ÷ 5150	73 ÷ 48
FG2 100/250A	75	100	800 ÷ 5750	88 ÷ 58

PERFORMANCE RANGE



PERFORMANCE DATA

n= 1450 1/min HS= 0 m

MODEL pump	MOTOR PAIRING		PERFORMANCE	
	kW	HP	Q l/min	H metres
FG4 32/160C	0.25	0.33	50 ÷ 175	6 ÷ 3.5
FG4 32/160B	0.37	0.5	50 ÷ 200	7.5 ÷ 4
FG4 32/160A	0.37	0.5	50 ÷ 225	9 ÷ 6
FG4 32/200C	0.55	0.75	50 ÷ 225	11 ÷ 8
FG4 32/200B	0.75	1	50 ÷ 250	12.5 ÷ 9
FG4 32/200A	1.1	1.5	50 ÷ 250	14 ÷ 11
FG4 32/200BH	0.55	0.75	50 ÷ 150	11 ÷ 9
FG4 32/200AH	0.55	0.75	50 ÷ 160	13.5 ÷ 11
FG4 40/160C	0.37	0.5	50 ÷ 300	6.5 ÷ 3.5
FG4 40/160B	0.37	0.5	50 ÷ 300	8 ÷ 5
FG4 40/160A	0.55	0.75	50 ÷ 350	9.5 ÷ 5
FG4 40/200B	0.75	1	50 ÷ 350	11.5 ÷ 7
FG4 40/200A	1.1	1.5	50 ÷ 350	13.5 ÷ 10
FG4 40/250C	1.1	1.5	50 ÷ 350	16 ÷ 11.5
FG4 40/250B	1.5	2	50 ÷ 350	17.5 ÷ 13.5
FG4 40/250A	2.2	3	50 ÷ 350	22 ÷ 18
FG4 50/125C	0.37	0.5	150 ÷ 600	4 ÷ 1.5
FG4 50/125B	0.55	0.75	150 ÷ 600	5 ÷ 2
FG4 50/125A	0.55	0.75	150 ÷ 600	6 ÷ 3
FG4 50/160C	0.55	0.75	150 ÷ 500	7 ÷ 4
FG4 50/160B	0.75	1	150 ÷ 550	8 ÷ 5
FG4 50/160A	1.1	1.5	150 ÷ 550	9 ÷ 7
FG4 50/200C	1.5	2	200 ÷ 850	11 ÷ 7.5
FG4 50/200B	2.2	3	200 ÷ 850	13 ÷ 9.5
FG4 50/200A	2.2	3	200 ÷ 900	15 ÷ 11
FG4 50/200AR	3	4	200 ÷ 900	17 ÷ 13
FG4 50/250D	1.1	1.5	150 ÷ 450	12.5 ÷ 8
FG4 50/250C	1.5	2	150 ÷ 450	14.5 ÷ 10.5
FG4 50/250B	2.2	3	150 ÷ 500	18 ÷ 14.5
FG4 50/250A	2.2	3	150 ÷ 500	21 ÷ 18
FG4 50/250AR	3	4	150 ÷ 500	24 ÷ 21
FG4 65/125C	0.55	0.75	300 ÷ 900	4 ÷ 2.5
FG4 65/125B	0.75	1	300 ÷ 1000	4.5 ÷ 3
FG4 65/125A	1.1	1.5	300 ÷ 1100	5.5 ÷ 4.5
FG4 65/160C	1.1	1.5	300 ÷ 1100	8 ÷ 5.5
FG4 65/160B	1.5	2	300 ÷ 1200	9 ÷ 5.5
FG4 65/160A	2.2	3	300 ÷ 1200	10 ÷ 7
FG4 65/200B	2.2	3	200 ÷ 1000	11 ÷ 9
FG4 65/200A	2.2	3	200 ÷ 1050	12.5 ÷ 10
FG4 65/200AR	3	4	200 ÷ 1050	14.3 ÷ 11.5
FG4 65/250C	3	4	200 ÷ 1175	19 ÷ 13
FG4 65/250B	4	5.5	200 ÷ 1250	21.5 ÷ 15.5
FG4 65/250A	5.5	7.5	200 ÷ 1300	23.5 ÷ 17

MODEL pump	MOTOR PAIRING		PERFORMANCE	
	kW	HP	Q l/min	H metres
FG4 80/160D	1.5	2	250 ÷ 2000	6 ÷ 2.5
FG4 80/160C	2.2	3	250 ÷ 2000	7.5 ÷ 3.5
FG4 80/160B	2.2	3	250 ÷ 2000	8.5 ÷ 5
FG4 80/160A	3	4	250 ÷ 2000	10 ÷ 6
FG4 80/200B	4	5.5	250 ÷ 1825	14 ÷ 8.5
FG4 80/200A	5.5	7.5	250 ÷ 1950	15.5 ÷ 10
FG4 80/250B	5.5	7.5	300 ÷ 1800	19 ÷ 13.5
FG4 80/250A	7.5	10	300 ÷ 1950	22 ÷ 15
FG4 100/160C	2.2	3	500 ÷ 2500	7 ÷ 3
FG4 100/160B	3	4	500 ÷ 2750	8 ÷ 3
FG4 100/160A	3	4	500 ÷ 3000	8.5 ÷ 3.5
FG4 100/200C	4	5.5	400 ÷ 2325	12.5 ÷ 7
FG4 100/200B	5.5	7.5	400 ÷ 2450	14 ÷ 8
FG4 100/200A	5.5	7.5	400 ÷ 2625	15.5 ÷ 9.5
FG4 100/250B	7.5	10	400 ÷ 2575	18.5 ÷ 12
FG4 100/250A	9.2	12.5	400 ÷ 2875	22 ÷ 14.5