

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



REGULATION (EU) N. 547/2012

CERTIFICATIONS

COMPANY WITH MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO 9001: QUALITY
ISO 14001: ENVIRONMENT AND SAFETY



AN30



ПРМОТЕКТ-168

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

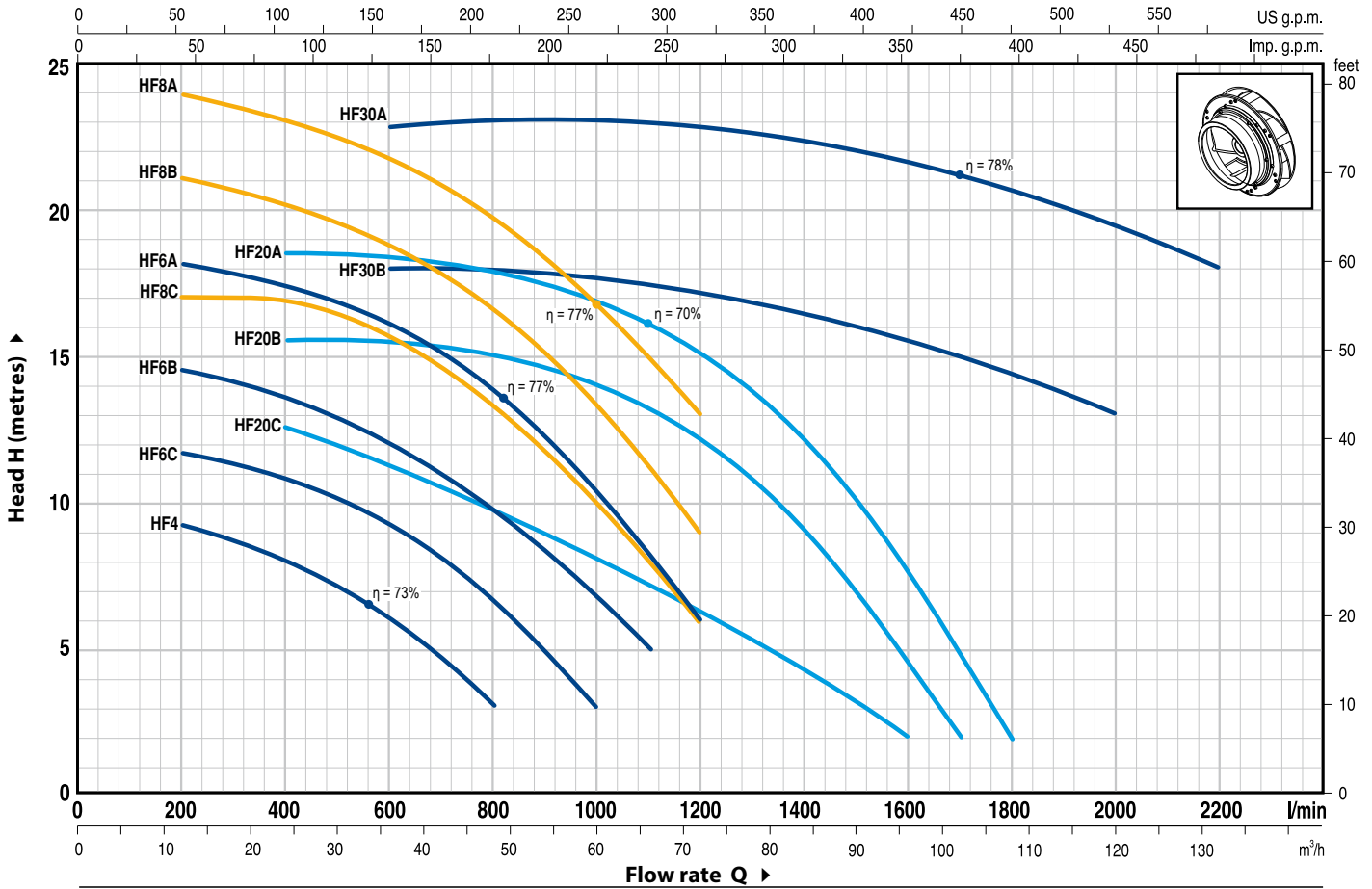
- Special mechanical seal
- Other voltages or 60 Hz frequency

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

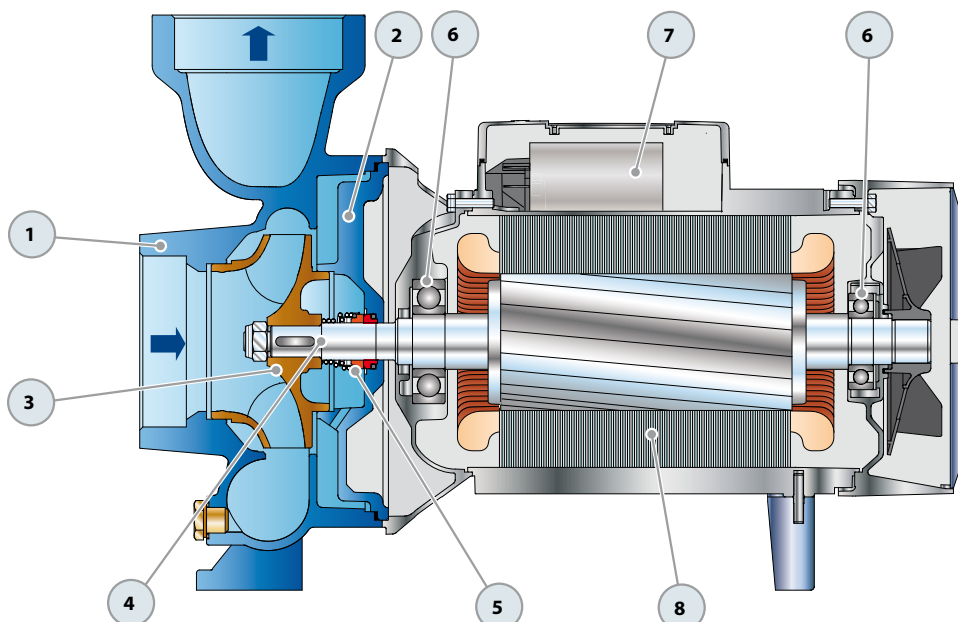


MODEL		POWER		Q	H metres																			
Single-phase	Three-phase	kW	HP		m³/h	0	12	18	24	30	36	42	48	54	60	66	72	84	96	102	108	120	132	
				l/min	0	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1700	1800	2000	2200		
HFm 4	HF 4	0.75	1		10	9.3	8.7	8	7	6	4.7	3												
HFm 6C	HF 6C	1.1	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								
HFm 8C	-	2.2	3		17	17	16.9	16.8	16.5	15.5	14.5	13.5	11.8	10	8	6								
HFm 8B	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								
HFm 20C	-	2.2	3		12.5	-	-	12.5	12	11.5	10.5	9.8	9	8.1	7.2	6.3	4.3	2						
HFm 20B	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		

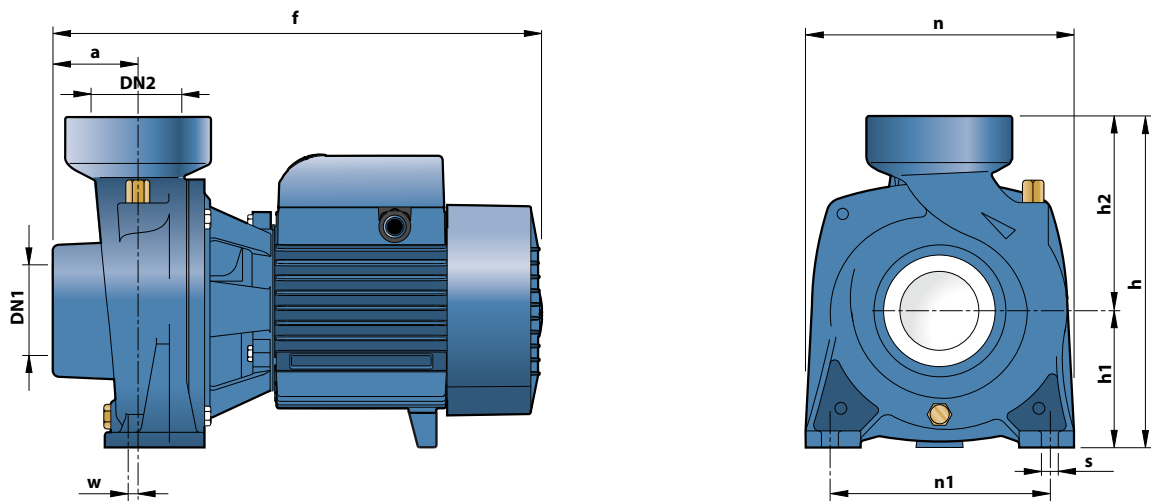
Q = Flow rate H = Total manometric head HS = Suction height

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

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	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 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	Pump	Model					
		HF 4	6203 ZZ / 6203 ZZ					
		HF 6	6304 ZZ / 6204 ZZ					
		HFm 8C-20C HF 8B-20B	6206 ZZ - C3 / 6205 ZZ					
		HFm 8B-20B HF 8A-20A	6306 ZZ - C3 / 6206 ZZ - C3					
		HF 30	6307 ZZ - C3 / 6206 ZZ - C3					
7	CAPACITOR	Pump	Capacitance					
		<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				
		HFm 8C	70 µF 450 VL	-				
		HFm 8B	60 µF 450 VL	-				
		HFm 20C HFm 20B	70 µF 450 VL 60 µF 450 VL	-				
8	ELECTRIC MOTOR	HFm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding (up to 1.5 kW). 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 X4.						



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"	47	317	240	97	143	198	155	-68	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												-	26.7
HFm 8C	-	4"	4"	80	445	370	132	180	245	212	30	14	35.0	-
HFm 8B	HF 8B				465/445								40.0	35.0
-	HF 8A				465								-	40.0
HFm 20C	-				450								35.0	-
HFm 20B	HF 20B				465/450								40.0	35.0
-	HF 20A	465	-	40.0										
-	HF 30B	82	585	370	160	210	292	212	292	212	-	-	-	60.9
-	HF 30A												-	65.2

ABSORPTION

MODEL	VOLTAGE (single-phase)		
	230 V	240 V	110 V
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
HFm 8C	15.0 A	14.5 A	-
HFm 8B	20.0 A	19.0 A	-
HFm 20C	14.5 A	14.0 A	-
HFm 20B	20.0 A	19.0 A	-

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
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			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				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
HFm 8C	HF 8B	18	1430	-	650	24	1860	-	860
HFm 8B	HF 8A	18	1430	-	740	24	1860	-	980
HFm 20C	HF 20B	18	1430	-	650	24	1860	-	860
HFm 20B	HF 20A	18	1430	-	740	24	1860	-	980
-	HF 30B	12	1570	-	750	16	2040	-	990
-	HF 30A	12	1570	-	800	16	2040	-	1060

