

## Centrifugal pumps

High flow

 Clean water

 Agricultural use

 Industrial use



### PERFORMANCE RANGE

- Flow rate up to **2400 l/min** (144 m<sup>3</sup>/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 60335-1  
IEC 60335-1  
CEI 61-150

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



### 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.

Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

### OPTIONS AVAILABLE ON REQUEST

- Pump body with NPT ANSI B 1.20.1 threaded ports
- Special mechanical seal
- Other voltages

### GUARANTEE

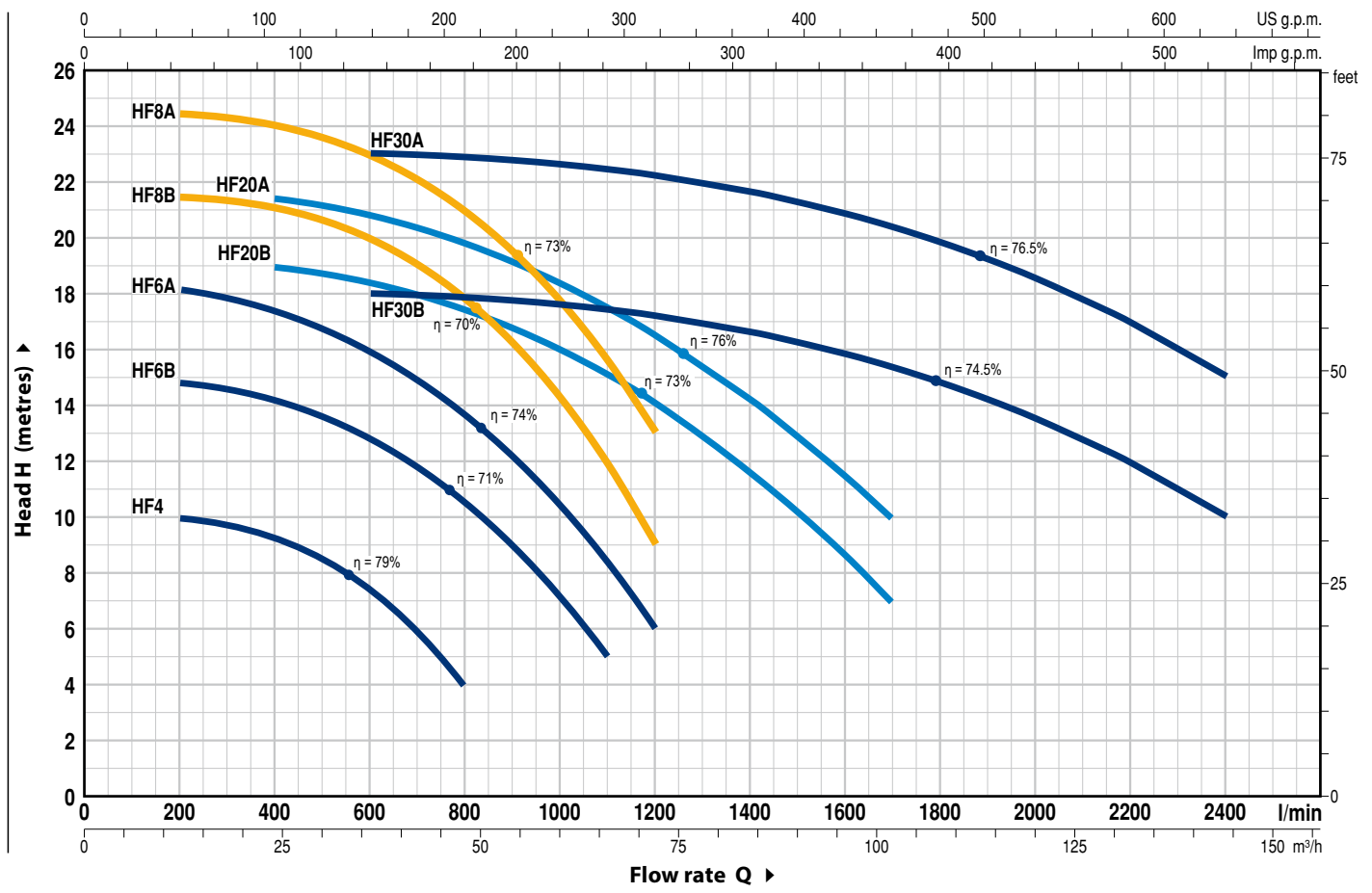
2 years subject to terms and conditions

### CERTIFICATIONS

Company with management system certified DNV  
ISO 9001: QUALITY

### CHARACTERISTIC CURVES AND PERFORMANCE DATA

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



MODEL		POWER (P <sub>2</sub> )		Q	Flow rate																		
Single-ph.	Three-ph.	kW	HP ▲		m <sup>3</sup> /h	0	12	18	24	30	36	42	48	54	60	66	72	87	102	114	129	144	
				l/min	0	200	300	400	500	600	700	800	900	1000	1100	1200	1450	1700	1900	2150	2400		
HFm 4	HF 4	0.75	1	IE3 H metres	10	10	9.8	9.3	8.5	7.4	5.9	4											
HFm 6B	HF 6B	1.5	2		14.8	14.8	14.6	14.2	13.6	12.8	11.8	10.5	9	7.2	5								
HFm 6A	HF 6A	2.2	3		18.5	18.1	17.8	17.4	16.8	16	14.9	13.7	12.2	10.4	8.4	6							
HFm 8B	HF 8B	3	4		21.5	21.5	21.4	21.1	20.7	20	19.1	17.8	16.2	14.3	11.9	9							
-	HF 8A	4	5.5		24.5	24.5	24.4	24.1	23.6	23	22.1	21	19.5	17.7	15.6	13							
-	HF 20B	3	4		19	-	-	19	18.8	18.4	18	17.5	16.8	16.1	15.2	14.2	11	7					
-	HF 20A	4	5.5		21.5	-	-	21.5	21.3	20.9	20.5	19.9	19.2	18.5	17.6	16.6	13.7	10					
	HF 30B	5.5	7.5		18	-	-	-	-	18	17.9	17.9	17.8	17.6	17.4	17.2	16.4	15.3	14.2	12.3	10		
	HF 30A	7.5	10		23	-	-	-	-	23	22.9	22.9	22.8	22.6	22.4	22.2	21.4	20.4	19.2	17.3	15		

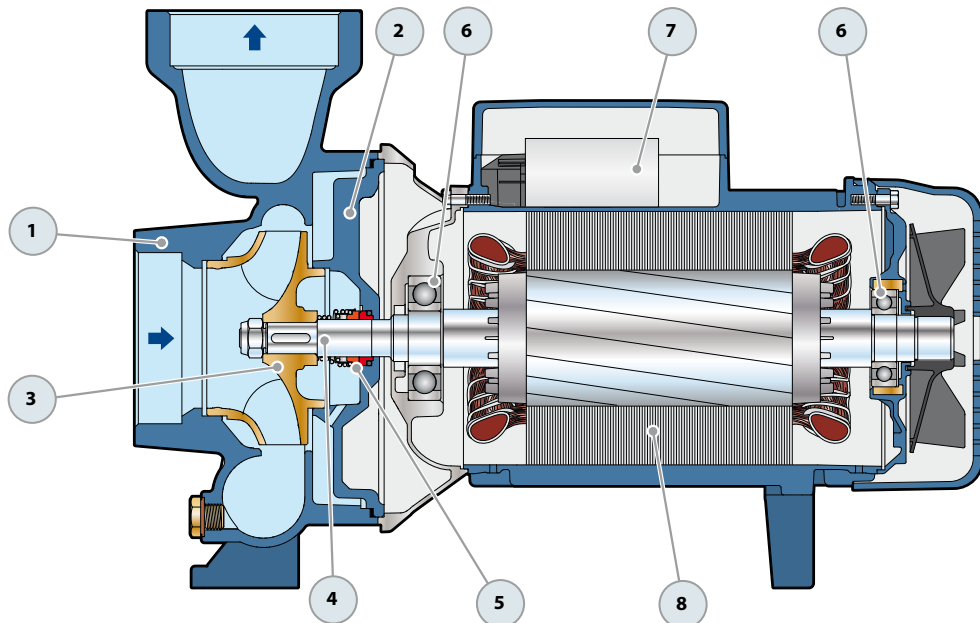
Q = Flow rate H = Total manometric head HS = Suction height

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

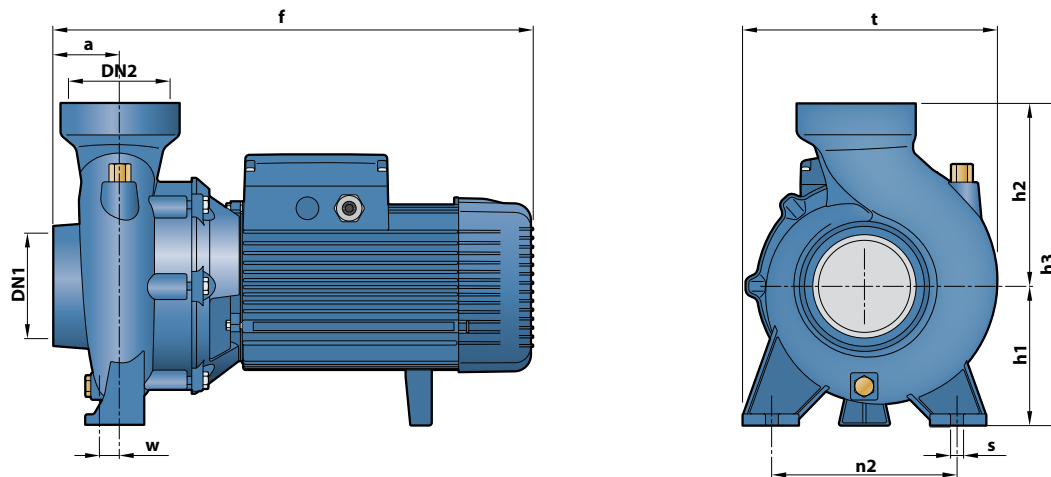
▲ Three-phase motor efficiency class (IEC 60034-30-1)

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Cast iron complete with threaded ports in compliance with ISO 228/1					
<b>2 BODY BACKPLATE</b>	Cast iron (stainless steel AISI 304 for HF 4)					
<b>3 IMPELLER</b>	Stainless steel AISI 431 for HF 4 Brass for HF 6, HF 8 Cast iron for HF 20, HF 30					
<b>4 MOTOR SHAFT</b>	Stainless steel AISI 431					
<b>5 MECHANICAL SEAL</b>	<b>Pump</b>	<b>Seal</b>	<b>Shaft</b>	<b>Materials</b>		
	<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, HF 20	FN-20	Ø 20 mm	Graphite	Ceramic	NBR
	HF 30	FN-24	Ø 24 mm	Graphite	Ceramic	NBR
<b>6 BEARINGS</b>	<b>Pump</b>	<b>Model</b>				
	HF 4	6203 ZZ / 6203 ZZ				
	HF 6	6304 ZZ / 6204 ZZ				
	HF 8B, HF 20B	6206 ZZ - C3 / 6205 ZZ				
	HFm 8B, HF 8A	6306 ZZ - C3 / 6206 ZZ - C3				
	HF 20A	6306 ZZ - C3 / 6206 ZZ - C3				
	HF 30	6307 ZZ - C3 / 6206 ZZ - C3				
<b>7 CAPACITOR</b>	<b>Pump</b>	<b>Capacitance</b>				
	<i>Single-phase</i>	<i>(220 V)</i>		<i>(110 V or 127 V)</i>		
	HFm 4	20	µF - 450 VL	60	µF - 300 VL	
	HFm 6B	45	µF - 450 VL	80	µF - 250 VL	
	HFm 6A	50	µF - 450 VL	-		
	HFm 8B	60	µF - 450 VL	-		
<b>8 ELECTRIC MOTOR</b>	<p>HFm: single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding.                      HF: three-phase 220/380 V - 60 Hz or 220/240 V - 60 Hz</p> <p>➔ <b>The three-phase pump is fitted with a high performance motor in class IE3 (IEC 60034-30-1)</b></p> <p>- Insulation: class F                      - Protection: IP X4</p>					



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm									kg	
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3	t	n2	w	s	1~	3~
HFm 4	HF 4	2½"	2½"	47	317	97	143	240	198	155	-63	10	14.3	14.3
HFm 6B	HF 6B	3"	3"	68	411	120	193	240	190	5	12.5	-	26.8	26.8
HFm 6A	HF 6A				429								29.3	29.3
HFm 8B	HF 8B	4"	4"	71	465/445	132	180	312	245	190	27	14	41.0	35.6
-	HF 8A				474								-	37.1
-	HF 20B				453								-	37.2
-	HF 20A				479								-	37.1
-	HF 30B				497								-	46.8
-	HF 30A				547								-	53.2
				76.5		160	210	370	292	212			-	

## ABSORPTION

MODEL	VOLTAGE		
	220 V	110 V	127 V
Single-phase			
HFm 4	5.8 A	11.6 A	10.0 A
HFm 6B	12.0 A	24.0 A	20.8 A
HFm 6A	13.0 A	26.0 A	22.5 A
HFm 8B	22.5 A	-	-

MODEL	VOLTAGE			
	220 V	380 V	220 V	440 V
Three-phase				
HF 4	4.5 A	2.6 A	3.8 A	2.1 A
HF 6B	7.8 A	4.5 A	6.9 A	4.1 A
HF 6A	9.5 A	5.5 A	8.5 A	4.8 A
HF 8B	12.0 A	7.0 A	12.1 A	6.5 A
HF 8A	18.2 A	10.5 A	18.5 A	12.0 A
HF 20B	14.2 A	8.2 A	13.0 A	6.5 A
HF 20A	19.4 A	11.2 A	17.3 A	10.3 A
HF 30B	22.5 A	13.0 A	20.1 A	11.8 A
HF 30A	28.8 A	16.6 A	28.0 A	16.7 A