

# HF Centrifugal pumps

High flow rates

-  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**

## INSTALLATION AND USE

Designed for civil and agricultural use.

Their high-efficiency levels and capability for continuous operation make them an ideal choice for furrow and sprinkler irrigation, in addition to drawing water from lakes, rivers, and wells. They are also suitable for a wide range of industrial applications that require substantial flow rates at medium-low head pressures.

## ELECTRIC MOTOR

The three-phase pumps are equipped with newly developed electric motors designed to work with inverters, which guarantee stable and quiet operation.

Efficiency class **IE3** for three-phase motors and **IE2** for single-phase motors, with class F insulation and IPX4 protection.

## APPLICATION LIMITS

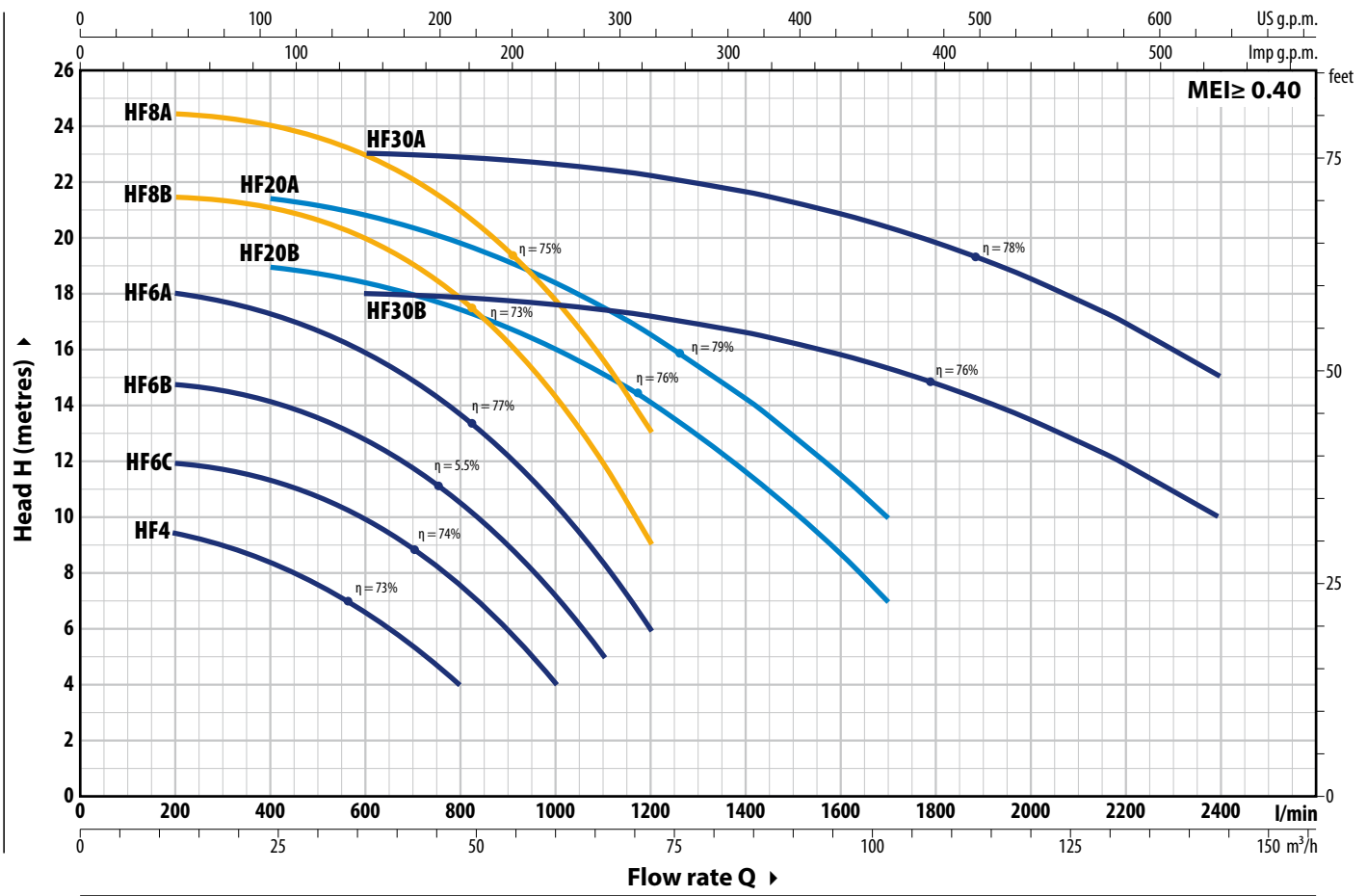
- Manometric suction head up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Maximum working pressure:
  - **6 bar** for HF 4
  - **10 bar** for HF 6-8-20-30

## AVAILABLE UPON REQUEST

- ✘ Mechanical seal options available
- ✘ Different voltage requirements 60 Hz frequency

**CURVES AND PERFORMANCE DATA – HS=0 m**

**50 Hz**



TYPE		POWER (P <sub>2</sub> )		1~3~	Q	H metres																
Single-ph.	Three-ph.	kW	HP			m³/h	0	12	18	24	30	36	42	48	60	66	72	102	114	144		
					l/min	0	200	300	400	500	600	700	800	1000	1100	1200	1700	1900	2400			
HFm 4	HF 4	0.75	1	IE2 IE3	H metres	9.8	9.5	9	8.5	7.6	6.6	5.4	4									
HFm 6C	HF 6C	1.1	1.5			12	12	11.8	11.4	10.8	10	9	7.6	4								
HFm 6B	HF 6B	1.5	2			14.8	14.8	14.6	14.2	13.6	12.8	11.8	10.5	7.2	5							
HFm 6A	HF 6A	2.2	3			18.5	18	17.8	17.4	16.8	16	15	13.7	10.4	8.4	6						
-	HF 8B	3	4			21.5	21.5	21.4	21	20.7	20	19	17.8	14.3	12	9						
-	HF 8A	4	5.5			24.5	24.5	24.4	24	23.6	23	22	21	17.7	15.6	13						
-	HF 20B	3	4			19	-	-	19	18.8	18.4	18	17.5	16	15.2	14.2	7					
-	HF 20A	4	5.5			21.5	-	-	21.5	21.3	21	20.5	20	18.5	17.6	16.6	10					
-	HF 30B	5.5	7.5			18	-	-	-	-	18	17.9	18	17.6	17.4	17.2	15.3	14.2	10			
-	HF 30A	7.5	10			23	-	-	-	-	23	23	22.8	22.6	22.4	22.2	20.4	19.2	15			

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

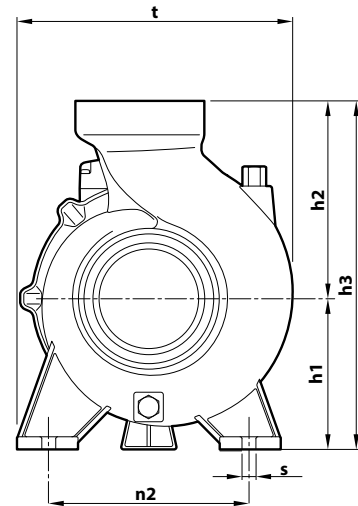
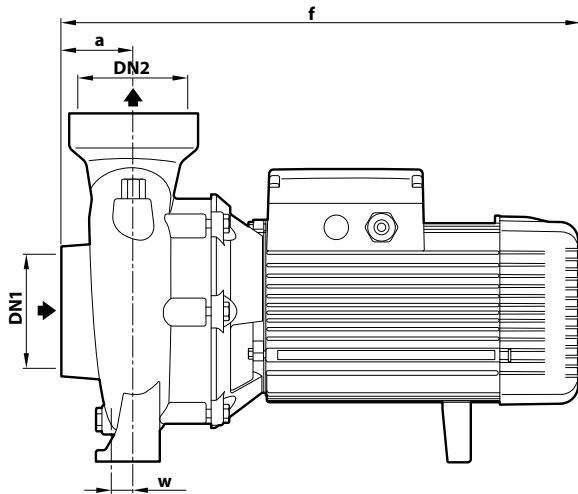
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

### ABSORPTION

TYPE	VOLTAGE
<b>Single-ph.</b>	<b>230 V</b>
<b>HFm 4</b>	5.9 A
<b>HFm 6C</b>	8.8 A
<b>HFm 6B</b>	10.4 A
<b>HFm 6A</b>	13.5 A

TYPE	VOLTAGE			
	230 V - Δ	400 V - 人	400 V - Δ	690 V - 人
<b>HF 4</b>	4.3 A	2.5 A	-	-
<b>HF 6C</b>	6.2 A	3.6 A	-	-
<b>HF 6B</b>	7.8 A	4.5 A	-	-
<b>HF 6A</b>	9.0 A	5.2 A	-	-
<b>HF 8B</b>	13.0 A	7.5 A	-	-
<b>HF 8A</b>	15.7 A	9.1 A	-	-
<b>HF 20B</b>	14.7 A	8.5 A	-	-
<b>HF 20A</b>	15.2 A	8.8 A	-	-
<b>HF 30B</b>	-	-	12.3 A	7.1 A
<b>HF 30A</b>	-	-	16.5 A	9.5 A

### DIMENSIONS AND WEIGHT



TYPE		PORTS		DIMENSIONS mm									kg		
Single-ph.	Three-ph.	DN1	DN2	a	f	h1	h2	h3	t	n2	w	s	1~	3~	
<b>HFm 4</b>	<b>HF 4</b>	2½"	2½"	47	317	97	143	240	198	155	-63	10	14.5	14.5	
<b>HFm 6C</b>	<b>HF 6C</b>	3"	3"	68	408	120	190	310	240	178	5	12	25.7	25.7	
<b>HFm 6B</b>	<b>HF 6B</b>				428								26.8	26.8	
<b>HFm 6A</b>	<b>HF 6A</b>				428								29.6	29.6	
-	<b>HF 8B</b>	4"	4"	71	474	132	180	312	245	190	27	14	-	37.6	
-	<b>HF 8A</b>				479								-	41.0	
-	<b>HF 20B</b>				479								-	37.6	
-	<b>HF 20A</b>				479	-	41.0								
-	<b>HF 30B</b>				76.5	497	160	210	370	292	212	27	14	-	52.0
-	<b>HF 30A</b>					547								-	58.0

## MATERIALS AND COMPONENTS

**1 Pump body** Cast iron with ISO 228/1 threaded ports

**2 Cover** Cast iron (**AISI 304** stainless steel for HF 4)

**3 Impeller** Stainless Steel **AISI 304** for HF 4-6  
Brass for HF 8  
Cast iron for HF 20, HF 30

4 Mechanical seal	Water pump	Seal	Shaft	Materials
	HF 4	<b>AR-14</b>	<b>Ø 14 mm</b>	Ceramic / Graphite / NBR
HF 6	<b>FN-18</b>	<b>Ø 18 mm</b>	Graphite / Ceramic / NBR	
HF 8, HF 20	<b>FN-20</b>	<b>Ø 20 mm</b>	Graphite / Ceramic / NBR	
HF 30	<b>FN-24</b>	<b>Ø 24 mm</b>	Graphite / Ceramic / NBR	

**5 Motor shaft** Stainless steel **AISI 431**

**6 Electric motor** **HFm**: single-phase 230 V - 50 Hz with winding integrated thermal motor protection  
**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 are equipped with high-efficiency motors (IEC 60034-30-1)  
class **IE2** for single-phase models  
class **IE3** for three-phase models  
Continuous running duty **S1**

