

### PERFORMANCE RANGE

Flow rate up to 1800 l/min (108 m<sup>3</sup>/h)  
Dynamic head up to 24.5 m

### OPERATING LIMITS

Suction lift up to 7 m  
Fluid temperature up to + 60°C  
Maximum ambient temperature + 40°C



**HF 6AR**

### WORKING PRINCIPLE

**HF** pumps are CENTRIFUGAL SINGLE-IMPELLER PUMPS designed to achieve high delivery rates with low to average heads. The impeller, mounted on the end of the drive shaft, directly faces the suction opening machined in the pump body. The shape of the impeller is designed, with minimal hydraulic losses, to impart radial motion from the centre outwards. During this operation the blades inside the impeller channel transfer energy to the fluid both in the form of pressure and increased speed. The fluid that leaves the impeller is conveyed into the volute which, together with the cone diffuser, transforms part of the kinetic energy into pressure energy.

### PUMP INSTALLATION AND APPLICATIONS

**HF** pumps are specifically designed for **domestic, agricultural and industrial** use. Their performance levels, mechanical design and structural materials are explicitly selected for these uses. The shapes of their volutes and impellers, with ample passages, make them suitable for pumping even fairly dirty water. **THEY CAN ACHIEVE HIGH DELIVERY RATES UNDER CONTINUOUS OR HEAVY DUTY, MAKING THEM ADVANTAGEOUS FOR RAIN AND GRAVITY IRRIGATION, FOR PUMPING WATER FROM LAKES, RIVERS, WELLS AND FOR A WIDE VARIETY OF INDUSTRIAL USES WHERE HIGH DELIVERY RATES MUST BE ACHIEVED AT LOW TO AVERAGE HEADS.**

The pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

**HF** pumps come in a wide and well-diversified range. Characteristic curves for the different models are distributed in a rational and complementary manner, making it easy to select the model most suited to each specific user requirement.

Special design efforts were made to unify the entire **HF** series, which is distinctive for its:

- especially ample characteristic curves;
- no surging phenomena even when pumping near minimum forecast delivery rates;
- performance characterized by high absolute values over the majority of the characteristic curve;
- flat absorption curves at high delivery rates, to prevent motor overloading even during prolonged use;
- good suction capacities at both low and high delivery rates.

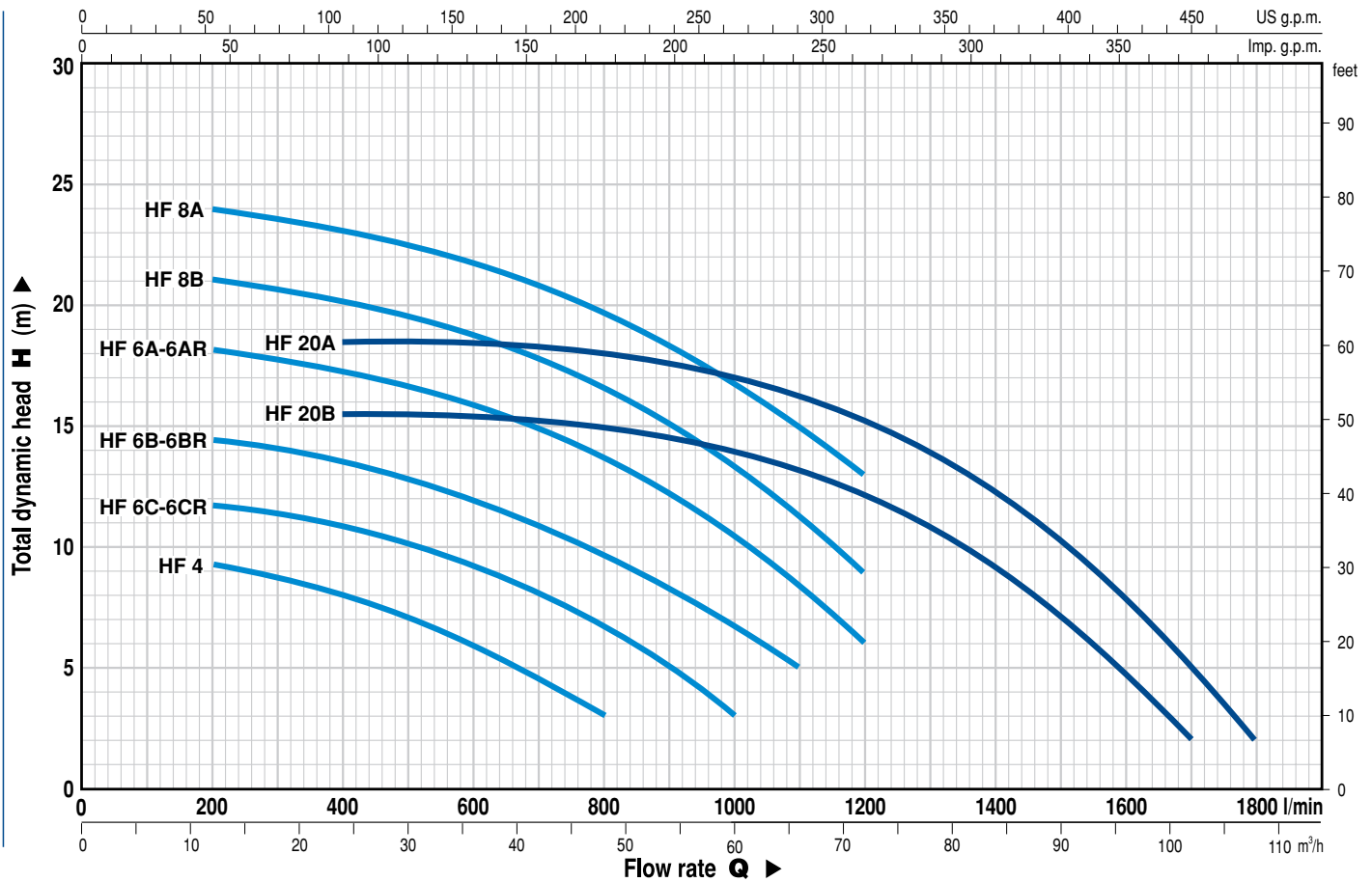
Curve tolerance according to ISO 2548.

### STRUCTURAL CHARACTERISTICS

- Cast iron **PUMP BODY** with UNI ISO 228/1 gas threaded suction and delivery **OPENINGS**.
- **BRASS IMPELLER** centrifugal radial flow type.
- **AISI 316 stainless steel MOTOR SHAFT** (AISI 416 up to 0.75 kW).
- Ceramic and graphite **MECHANICAL SEAL**.
- **MOTOR**: the pumps are coupled directly to an asynchronous, high efficiency PEDROLLO induction motor of suitable size, which is quiet running, closed and externally ventilated, suitable for continuous duty. **INSULATION class F** (B up to 0.75 kW).  
The thermal cutout relay (motor protector) is incorporated in single phase motors up to 1.5 kW.  
The remaining single phase motors and all three phase motors require an adequate external motor protector, and connections are to be according to current standards.
- **PROTECTION IP 44**.
- **CONSTRUCTION AND SAFETY STANDARDS** in compliance with EN 60 335-1 (IEC 335-1, CEI 61-150) EN 60034-1 (IEC 34-1, CEI 2-3).

**WARRANTY: 1 YEAR** (according to our general sales conditions).

PERFORMANCE CHART AT n= 2900 1/min

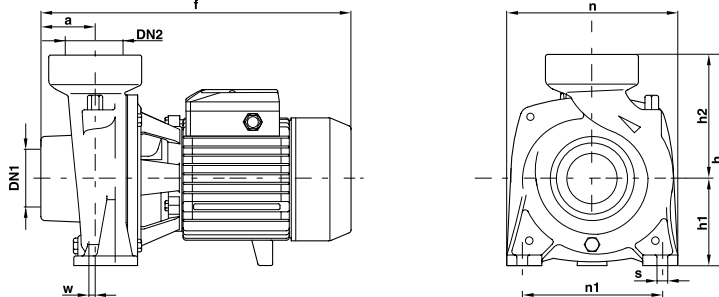


PERFORMANCE DATA AT n= 2900 1/min

PUMP MODEL		POWER		Q m³/h	H																			
Single phase	Three phase	kW	HP		0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	
				l/min	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	
HFm 4	HF 4	0.75	1	H m	10	9.8	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 6CR	HF 6CR	1.1	1.5		11.9	—	11.7	11.3	10.7	10.2	9.2	8	6.7	5	3									
HFm 6BR	HF 6BR	1.5	2		14.7	—	14.5	14	13.5	12.8	12	11	9.7	8.2	6.7	5								
HFm 6AR	HF 6AR	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 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 20B	HF 20B	3	4		16	—	—	—	15.5	15.4	15.3	15.2	15	14.5	14	13	12	10.7	9	7	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	13.7	12	10	7.8	5	2	

H = TOTAL DYNAMIC HEAD IN METERS

Q = FLOW RATE



PUMP MODEL		DN1	DN2	DIMENSIONS mm								
Single phase	Three phase			a	f	h	h1	h2	n	n1	w	s
HFm 4	HF 4	2 1/2"	2 1/2"	55	323	240	97	143	190	155	-	10
HFm 6C	HF 6C	3"	3"	68	385	312	120	192	240	190	6	12
HFm 6B	—	3"	3"	68	405	312	120	192	240	190	6	12
—	HF 6B	3"	3"	68	385	312	120	192	240	190	6	12
—	HF 6A	3"	3"	68	405	312	120	192	240	190	6	12
HFm 6CR	HF 6CR	4"	4"	70	387	312	120	192	240	190	6	12
HFm 6BR	—	4"	4"	70	407	312	120	192	240	190	6	12
—	HF 6BR	4"	4"	70	387	312	120	192	240	190	6	12
HFm 6AR	—	4"	4"	70	400	312	120	192	240	190	6	12
—	HF 6AR	4"	4"	70	407	312	120	192	240	190	6	12
HFm 8B	—	4"	4"	80	475	312	132	180	245	190	30	14
—	HF 8B	4"	4"	80	429	312	132	180	245	190	30	14
—	HF 8A	4"	4"	80	475	312	132	180	245	190	30	14
HFm 20B	—	4"	4"	80	475	312	132	180	245	190	30	14
—	HF 20B	4"	4"	80	429	312	132	180	245	190	30	14
—	HF 20A	4"	4"	80	475	312	132	180	245	190	30	14