

FCR 90-130-200

STAINLESS STEEL IMPELLERS

Multi-stage centrifugal pumps

 Clean water

 Domestic use

 Civil use



PERFORMANCE RANGE

- Flow rate up to **200 l/min** (12 m³/h)
- Head up to **111 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 **11 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

Company with management system certified DNV
ISO 9001: QUALITY



INSTALLATION AND USE

Suitable for use with clean water and with 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 tanks, and for the irrigation of gardens and orchards, etc. Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

PATENTS - TRADE MARKS - MODELS

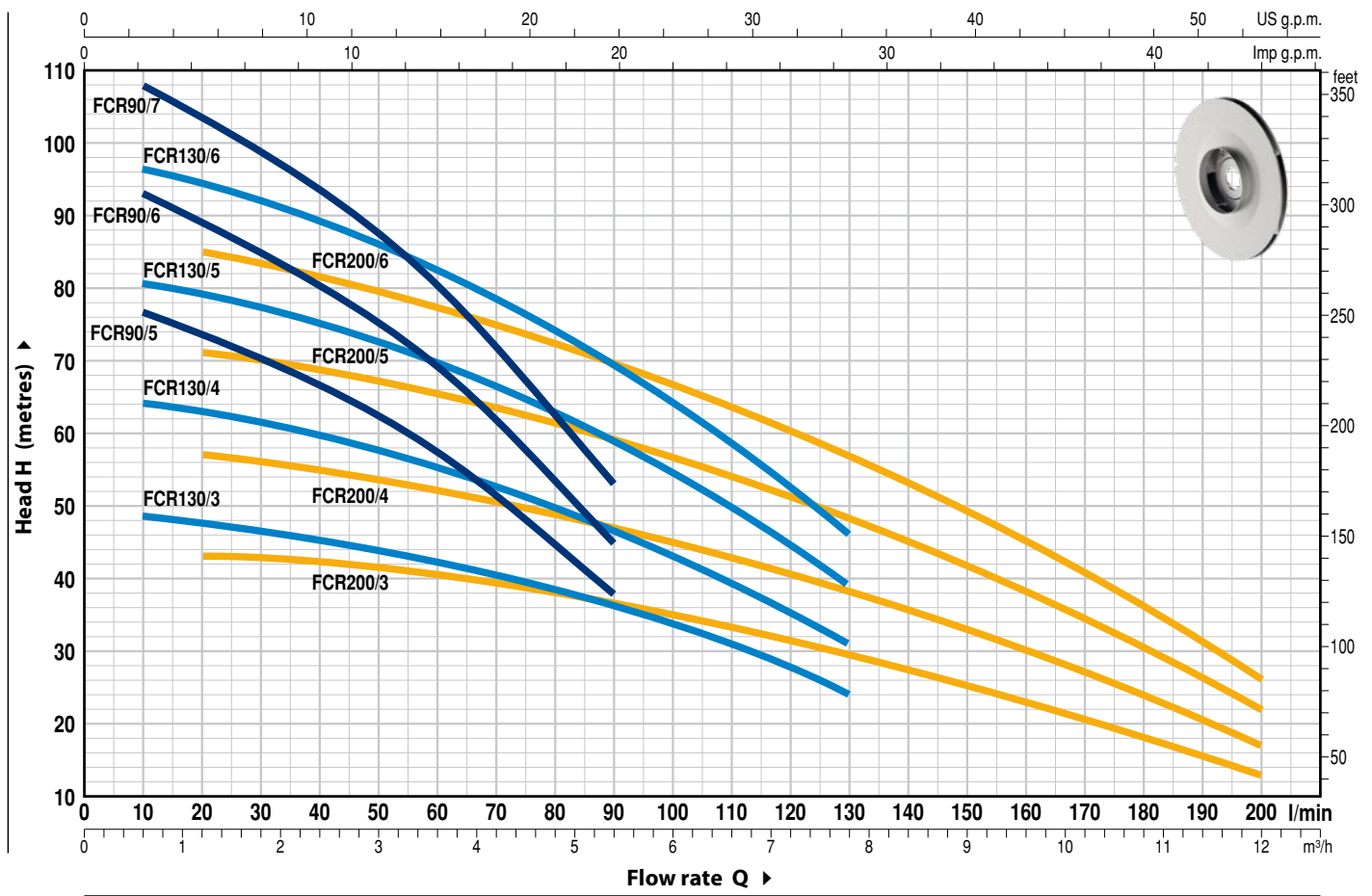
- Patent n. EP14755156.8

OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency
- IPX5 class protection

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



MODEL		POWER (P ₂)		▲	Q	m ³ /h														
Single-phase	Three-phase	kW	HP			0	0.3	0.6	1.2	2.4	3.6	4.8	5.4	6.0	7.8	8.4	9.6	10.8	12.0	
					l/min	0	5	10	20	40	60	80	90	100	130	140	160	180	200	
FCRm 90/5	FCR 90/5	1.1	1.5	IE3 H metres		80	78	77	74	67	57	45	38							
FCRm 90/6	FCR 90/6	1.5	2			96	94	92	88	80	69	53	45							
FCRm 90/7	FCR 90/7	1.8	2.5			111	110	108	103	93	80	63	53							
FCRm 130/3	FCR 130/3	1.1	1.5			49	49	48.5	47.5	45	42.5	38.5	36	33.5	24					
FCRm 130/4	FCR 130/4	1.5	2			65	65	64	63	60	56	50	47	43	31					
FCRm 130/5	FCR 130/5	1.8	2.5			81	81	80.5	79	75	70	62.5	59	54	39					
-	FCR 130/6	2.2	3			97	97	96.5	94.5	90	83	74.5	69	64	46					
FCRm 200/3	FCR 200/3	1.1	1.5			44	43.5	43.5	43	42	40.5	38	36.5	35	29	27.5	23	18	13	
FCRm 200/4	FCR 200/4	1.5	2			58	57.5	57.5	57	55	52.5	49.5	47	45	38	35.5	30	24	17	
FCRm 200/5	FCR 200/5	1.8	2.5			73	72	71.5	71	69	65.5	62	59	56.5	48	44.5	38	30	22	
-	FCR 200/6	2.2	3			87	86	85.5	85	82	78	73	69	67	57	53	45	36	26	

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

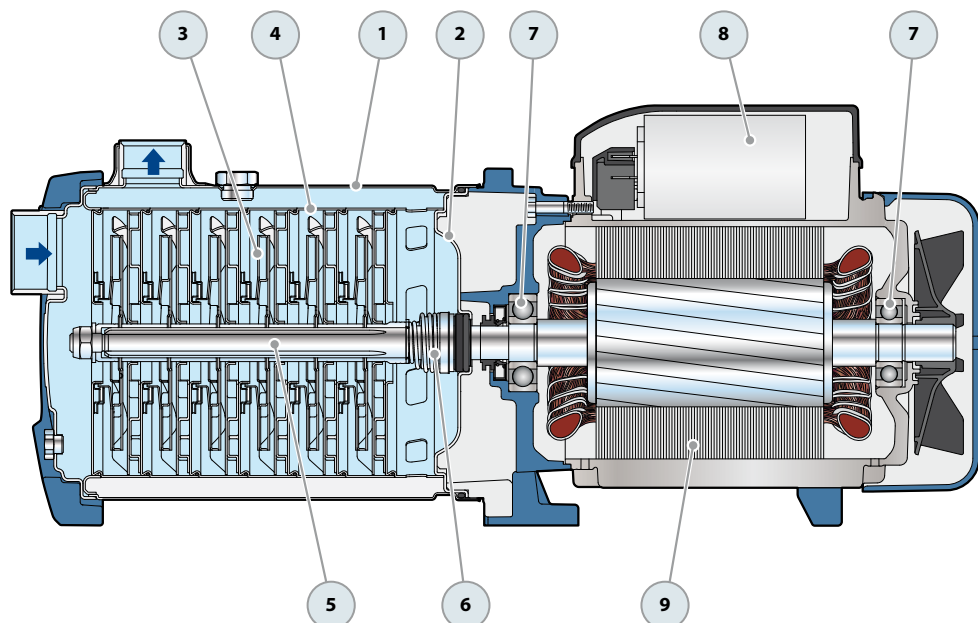
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

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

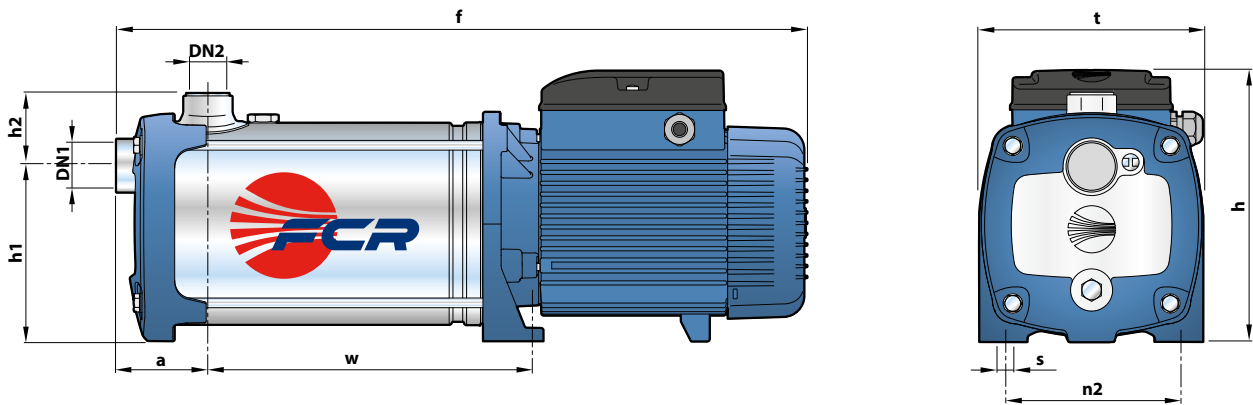
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POS. COMPONENT CONSTRUCTION CHARACTERISTICS

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	Stainless steel AISI 304			
4	DIFFUSERS	Stainless steel AISI 304			
5	MOTOR SHAFT	Stainless steel AISI 431			
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>
		FN-18	Ø 18 mm	Graphite	Ceramic NBR
7	BEARINGS	6304 2RS - C3 / 6204 ZZ - C3E			
8	CAPACITOR	<i>Pump</i>	<i>Capacitance</i>		
		<i>Single-phase</i>	<i>(230 V or 240 V)</i>	<i>(110 V)</i>	
		FCRm 90/5 FCRm 130/3 FCRm 200/3	31.5 µF - 450 VL	60 µF - 250 VL	
		FCRm 90/6 FCRm 130/4 FCRm 200/4	45 µF - 450 VL	80 µF - 250 VL	
		FCRm 90/7 FCRm 130/5 FCRm 200/5	50 µF - 450 VL	-	
9	ELECTRIC MOTOR	FCRm: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding. FCR: three-phase 230/400 V - 50 Hz. ⇒ The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1) – Insulation: class F – Protection: IP X4			



DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm									kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	t	n2	w	s	1~	3~
FCRm 90/5	FCR 90/5	1¼"	1"	75	497	228	145	59	185	145	191	11	20.3	19.8
FCRm 90/6	FCR 90/6				523						217		21.0	21.9
FCRm 90/7	FCR 90/7				569						243		26.0	26.0
FCRm 130/3	FCR 130/3				445						139		18.1	18.1
FCRm 130/4	FCR 130/4				471						165		20.0	20.1
FCRm 130/5	FCR 130/5				517						191		23.7	23.8
-	FCR 130/6				543						217		-	24.8
FCRm 200/3	FCR 200/3				445						139		18.1	18.1
FCRm 200/4	FCR 200/4				471						165		20.0	20.1
FCRm 200/5	FCR 200/5				518						191		23.7	23.6
-	FCR 200/6				543						217		-	24.4

ABSORPTION

MODEL	VOLTAGE		
	230 V	240 V	110 V
Single-phase	230 V	240 V	110 V
FCRm 90/5	9.0 A	8.6 A	18.0 A
FCRm 90/6	10.5 A	10.1 A	21.0 A
FCRm 90/7	12.5 A	12.0 A	-
FCRm 130/3	8.5 A	8.1 A	17.0 A
FCRm 130/4	10.3 A	9.9 A	26.0 A
FCRm 130/5	12.5 A	12.0 A	-
FCRm 200/3	8.7 A	8.3 A	17.4 A
FCRm 200/4	10.5 A	10.1 A	21.0 A
FCRm 200/5	12.5 A	12.0 A	-

MODEL	VOLTAGE					
	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
FCR 90/5	6.1 A	3.5 A	2.0 A	5.9 A	3.4 A	1.9 A
FCR 90/6	6.9 A	4.0 A	2.3 A	6.6 A	3.8 A	2.2 A
FCR 90/7	8.3 A	4.8 A	2.8 A	8.0 A	4.6 A	2.7 A
FCR 130/3	5.6 A	3.2 A	1.8 A	5.4 A	3.1 A	1.8 A
FCR 130/4	6.9 A	4.0 A	2.3 A	6.6 A	3.8 A	2.2 A
FCR 130/5	8.7 A	5.0 A	2.9 A	8.3 A	4.8 A	2.8 A
FCR 130/6	9.0 A	5.2 A	3.0 A	8.6 A	5.0 A	2.9 A
FCR 200/3	5.9 A	3.4 A	2.0 A	5.7 A	3.3 A	1.9 A
FCR 200/4	7.3 A	4.2 A	2.4 A	6.9 A	4.0 A	2.3 A
FCR 200/5	8.7 A	5.0 A	2.9 A	8.3 A	4.8 A	2.8 A
FCR 200/6	9.5 A	5.5 A	3.2 A	9.2 A	5.3 A	3.0 A