

# FCR 80-100

Multi-stage centrifugal electric pumps



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**MADE IN ITALY**

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 **PEDROLLO**<sup>®</sup>  
*the spring of life*

# FCR 80-100

## Multi-stage centrifugal electric pumps

 Clean water

 Domestic use

 Civic use



### ※ INSTALLATION AND USE

Thanks to quiet running and low power consumption these pumps are recommended for water supply and booster sets, for industrial applications, irrigation systems, etc.

### ※ EFFICIENT

Thanks to their high hydraulic performance and the low costs of investment and maintenance, the FCR pumps reduce the electricity consumption.

### ※ SILENT OPERATION

With the multi-stage construction, the operating noise is particularly reduced. The new electric motor, designed to operate with an inverter, has a silent operation.

### ※ COMPACT

The FCR pumps have small dimensions thus facilitating an easy installation even in small spaces.

### PERFORMANCE RANGE

- Flow rate up to **130 l/min** (7.8 m<sup>3</sup>/h)
- Head up to **67 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10°C** and **+60°C**
- Ambient temperature up to **+40°C**
- Max. working pressure **7 bar**
- Continuous service **S1**

### INSTALLATION AND USE

Suitable for pumping clean water and liquids which are not chemically aggressive towards the materials from which the pump is made. Because of their reliability and extremely silent operation, these

pumps are recommended for domestic applications, in particular for pressuring and distributing water in combination with small or medium pressure tanks, for gardening and irrigating systems, etc.

### OPTIONS AVAILABLE ON REQUEST

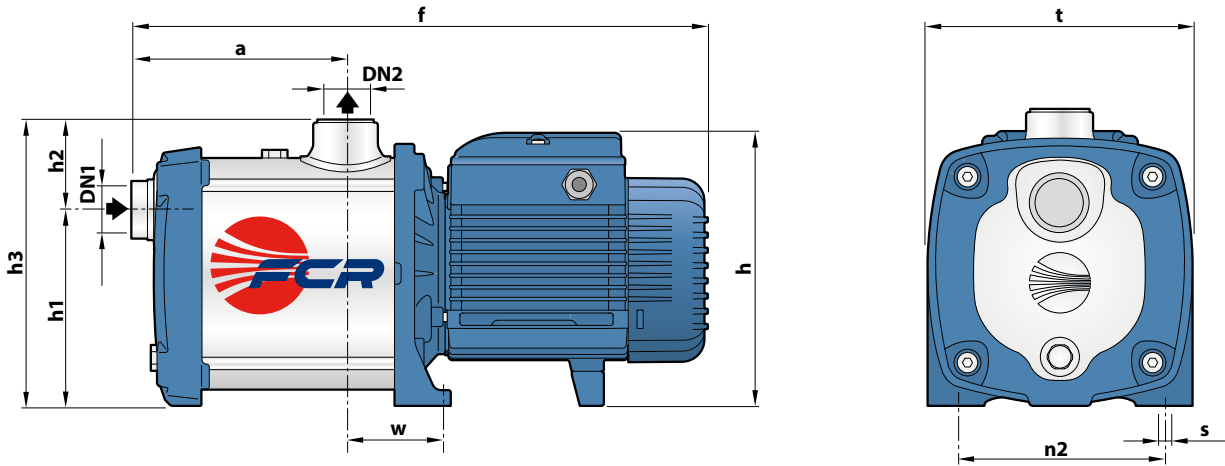
- Special mechanical seal
- Other voltages or 60 Hz frequency
- WRAS certified electric pumps



### WARRANTY

2 years as per our general terms and conditions of sale

## DIMENSIONS AND WEIGHTS



MODEL		PORTS		DIMENSIONS mm										kg	
Single phase	Three phase	DN1	DN2	a	f	h	h1	h2	h3	t	n2	w	s	1~	3~
FCRm 80/2	FCR 80/2	1"	1"	107	333	171	122	56	178	160	125	56.5	9	7.3	7.3
FCRm 80/3	FCR 80/3													8.5	8.5
FCRm 80/4	FCR 80/4			132	358	189								8.6	8.6
FCRm 80/5	FCR 80/5													9.7	9.8
FCRm 100/3	FCR 100/3			107	333	171								9.1	8.4
FCRm 100/4	FCR 100/4			132	377	189								12.2	10.6
FCRm 100/5	FCR 100/5													11.4	10.7

(\*) h=221 mm for single-phase versions at 110 V

## ABSORPTION

MODEL	VOLTAGE	
	230 V	240 V
Single phase	230 V	240 V
FCRm 80/2	2.2 A	2.2 A
FCRm 80/3	3.2 A	3.2 A
FCRm 80/4	3.9 A	3.7 A
FCRm 80/5	5.5 A	5.3 A
FCRm 100/3	4.1 A	3.9 A
FCRm 100/4	5.8 A	5.6 A
FCRm 100/5	6.8 A	6.5 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 80/2	1.7 A	1.0 A	0.6 A	1.7 A	1.0 A	0.6 A
FCR 80/3	2.5 A	1.5 A	0.9 A	2.4 A	1.4 A	0.8 A
FCR 80/4	3.4 A	2.0 A	1.2 A	3.3 A	1.9 A	1.1 A
FCR 80/5	4.3 A	2.5 A	1.4 A	4.2 A	2.4 A	1.4 A
FCR 100/3	3.4 A	2.0 A	1.2 A	3.3 A	1.9 A	1.1 A
FCR 100/4	4.0 A	2.3 A	1.3 A	3.8 A	2.2 A	1.3 A
FCR 100/5	4.3 A	2.5 A	1.4 A	4.2 A	2.4 A	1.4 A

## CAPACITOR

MODEL	CAPACITY
	(230 V or 240 V)
Single phase	(230 V or 240 V)
FCRm 80/2	10 $\mu$ F - 450 VL
FCRm 80/3	12.5 $\mu$ F - 450 VL
FCRm 80/4	14 $\mu$ F - 450 VL
FCRm 80/5	20 $\mu$ F - 450 VL
FCRm 100/3	14 $\mu$ F - 450 VL
FCRm 100/4	20 $\mu$ F - 450 VL
FCRm 100/5	25 $\mu$ F - 450 VL

CAPACITORS EN 60252-1/A1

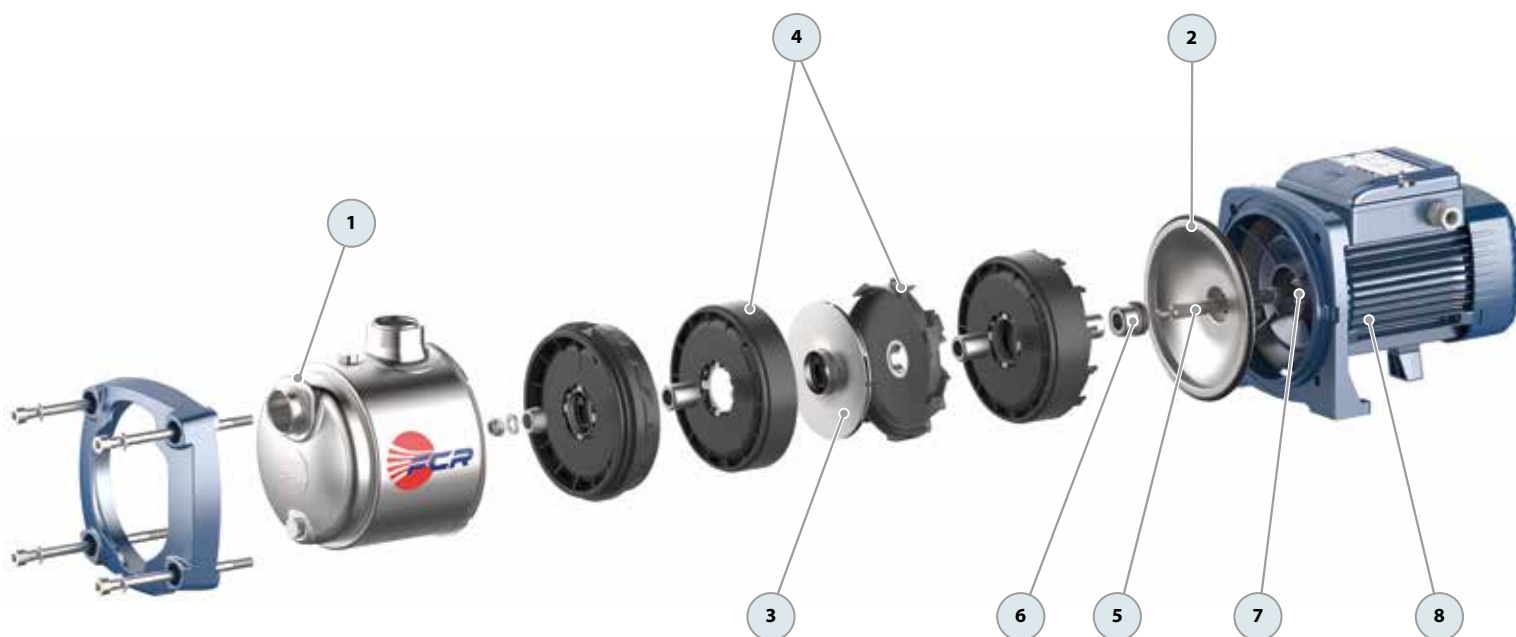


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### POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	AISI 304 stainless steel with threaded ports in compliance with ISO 228/1				
2	<b>COVER</b>	Stainless steel AISI 304				
3	<b>IMPELLERS</b>	Stainless steel AISI 304				
4	<b>DIFFUSERS</b>	Noryl complete with anti-wear rings				
5	<b>MOTOR SHAFT</b>	Stainless steel AISI 431				
6	<b>MECHANICAL SEAL</b>	<i>Seal Model</i>	<i>Shaft Diameter</i>	<i>Stationary ring</i>	<i>Materials Rotational ring</i>	<i>Elastomer</i>
		AR-13	Ø 13 mm	Ceramic	Graphite	NBR
7	<b>BEARINGS</b>	<i>Electric pump Model</i>				
		FCR 80/2 FCR 80/3 FCR 80/4 FCR 100/3	6202 ZZ - C3 / 6201 ZZ			
		FCR 100/4 FCR 80/5 FCR 100/5	6203 ZZ / 6203 ZZ			
8	<b>ELECTRIC MOTOR</b>	<p><b>FCRm:</b> single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding.  <b>FCR:</b> three-phase 230/400 V - 50 Hz.</p> <p>⇒ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b></p> <p>– Insulation: class F                      – Protection: IP X4</p>				



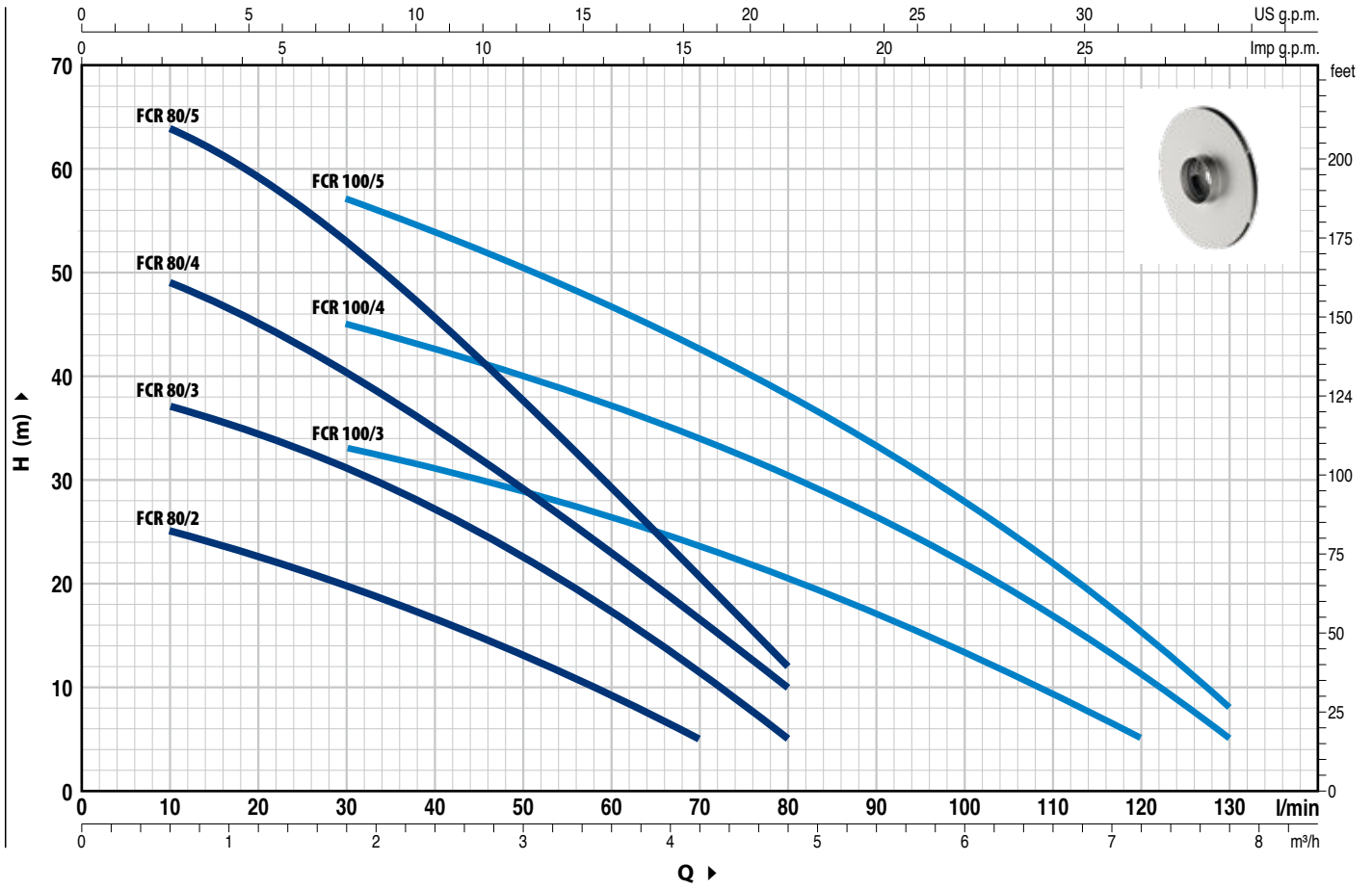
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### CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 min<sup>-1</sup> HS= 0 m



MODEL		POWER (P <sub>2</sub> )		Q	Q																		
Single phase	Three phase	kW	HP ▲		m <sup>3</sup> /h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	
				l/min	0	5	10	15	20	25	30	40	50	60	70	80	90	100	110	120	130		
FCRm 80/2	FCR 80/2	0.37	0.50	IE3 H metres	27	26	25	24	22.5	21	20	16.5	13	9	5								
FCRm 80/3	FCR 80/3	0.45	0.60		40	38	37	36	34.5	33	31	27	22.5	17	11	5							
FCRm 80/4	FCR 80/4	0.55	0.75		52	50	49	47	44.5	42	40	34	28.5	22.5	16	10							
FCRm 80/5	FCR 80/5	0.75	1		67	66	64	62	59	56	53	45.5	37.5	29.5	20.5	12							
FCRm 100/3	FCR 100/3	0.55	0.75		38	37	36	35	34.5	33.5	33	31	28	26	23	20	17	13.5	10	5			
FCRm 100/4	FCR 100/4	0.75	1		50	50	49	48	47	46	45	42	39.5	37	34	30.5	26.5	22	17	11	5		
FCRm 100/5	FCR 100/5	1.1	1.5		63	62	61.5	60.5	59.5	58	57	53.5	50.5	46.5	42.5	38	33	28	22	15	8		

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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