

# FCR 15-30

## Multi-stage centrifugal pumps

 Clean water

 Civil use

 Industrial use



### PERFORMANCE RANGE

- Flow rate up to **800 l/min** (48 m<sup>3</sup>/h)
- Head up to **120 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-15 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure **12 bar**
- Continuous service **S1**

### INSTALLATION AND USE

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

Very high performance thanks to an accurate fluid dynamic design. All the components of the pump are made of stainless steel with smooth surfaces which reduce friction losses and increase the efficiency.

With the multi-stage construction the operating noise is particularly reduced. The new concept electric motor, designed to also operate with an inverter, has a balanced low noise operation. Efficiency Class IE3, Insulation Class F and Protection Class IP 55.

The pump components are made of high-thickness stamped stainless steel.

The mechanical seal in GRAPHITE-CERAMIC-NBR allows reliable and regular operation for a long period of time.

### 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



### OPTIONS AVAILABLE ON REQUEST

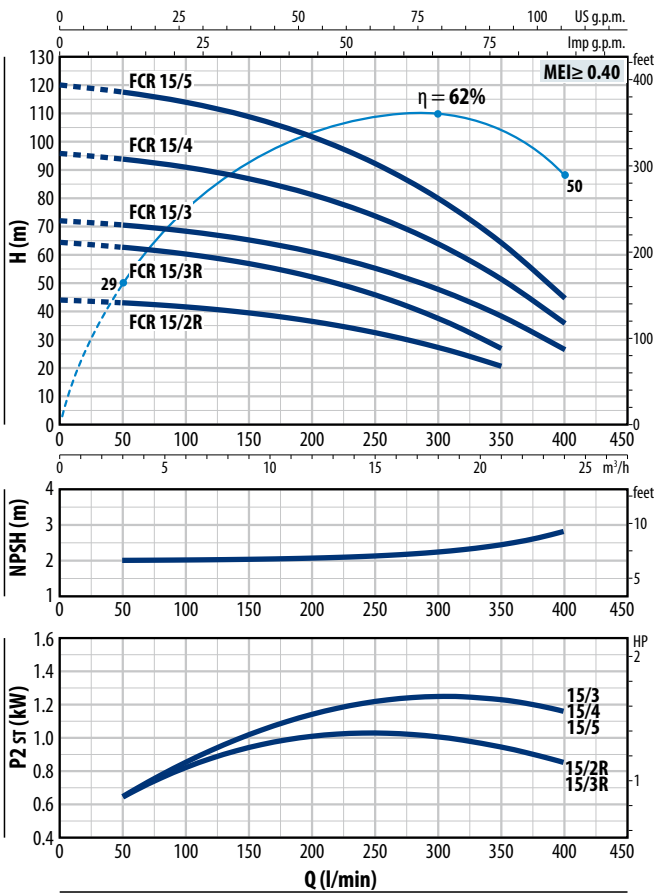
- Other voltages or 60 Hz frequency.
- Pump in AISI 316 stainless steel.
- For liquids with higher or lower temperatures.
- Pump body with NPT ANSI B 1.20.1 threaded ports.
- WRAS certified electric waterpump 
- Supply of ISO 228/1 flanges for the suction and delivery ports in AISI 304. stainless steel.



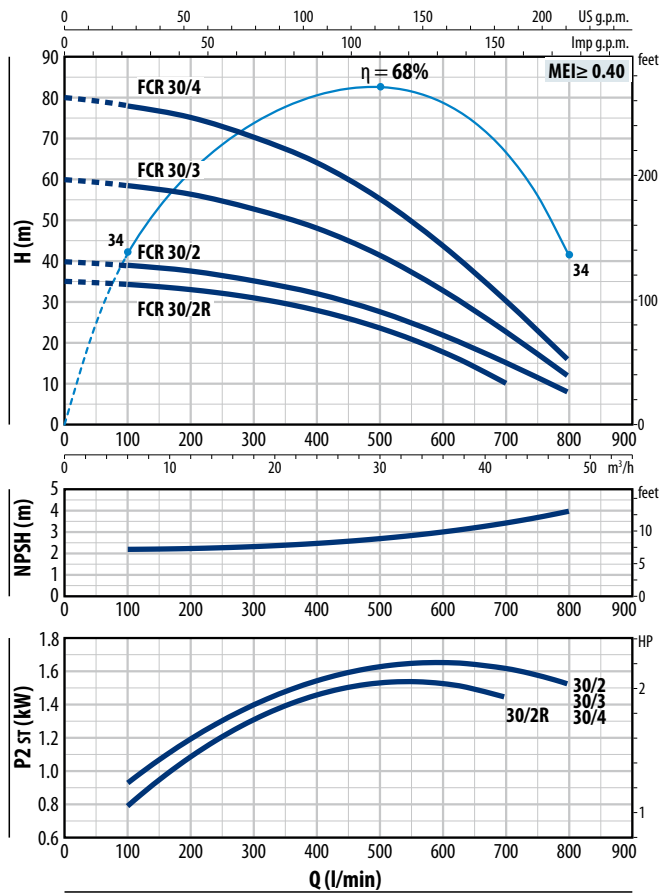
## CHARACTERISTIC CURVES AND PERFORMANCE DATA

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

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MODEL	POWER (P <sub>2</sub> )		▲	Q	m <sup>3</sup> /h							
	kW	HP			0	3	6	12	18	21	24	
Three-phase				Q	0	50	100	200	300	350	400	
FCR 15/2R	2.2	3	IE3	H metres	44	43	41.5	36.5	27.5	20.5		
FCR 15/3R	3	4			64.5	62.5	60.5	52.0	37.5	27		
FCR 15/3	4	5.5			72	70	68.5	61	48	38.5	27	
FCR 15/4	5.5	7.5			96	94	91	81	64	51.5	36	
FCR 15/5	7.5	10			120	117	114	102	80	64.5	45	

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MODEL	POWER (P <sub>2</sub> )		▲	Q	m <sup>3</sup> /h								
	kW	HP			0	6	12	18	24	36	42	48	
Three-phase				Q	0	100	200	300	400	600	700	800	
FCR 30/2R	3	4	IE3	H metres	35	34	33	31	28	17.6	10		
FCR 30/2	4	5.5			40	39	37.5	35	31.5	22	22.1	8	
FCR 30/3	5.5	7.5			60	58.5	56	52.5	47.5	33	33	12	
FCR 30/4	7.5	10			80	78	75	70	63	44	44	16	

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

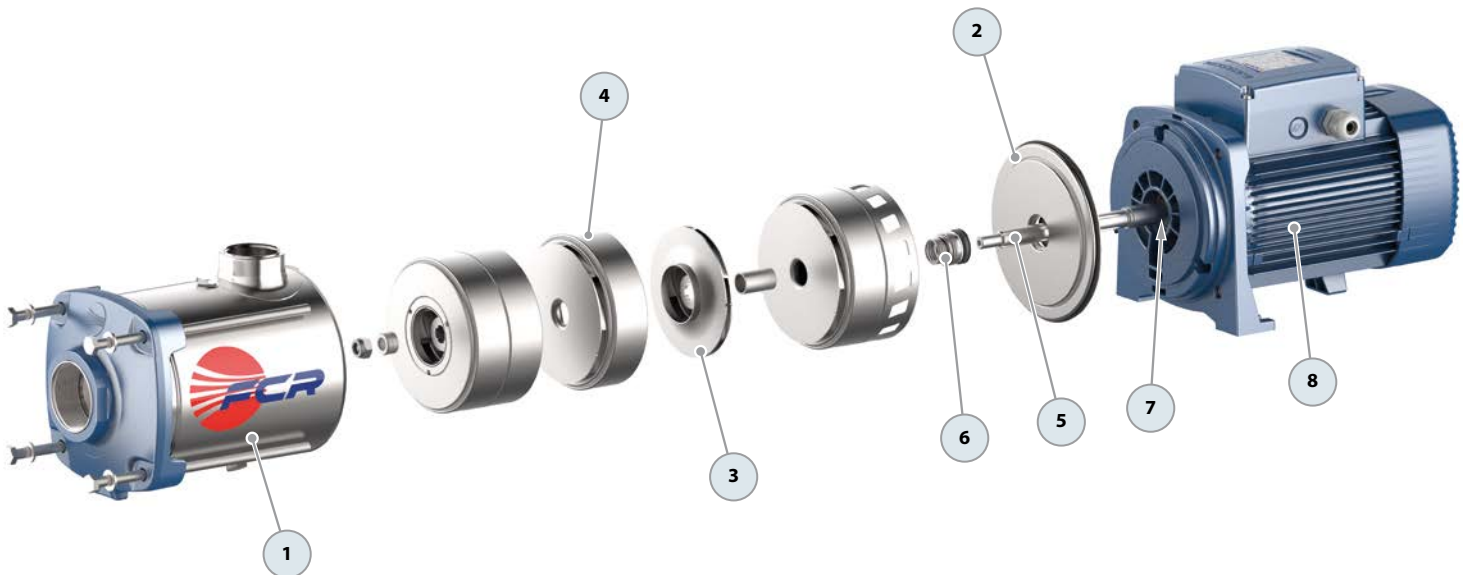
**4 DIFFUSERS** Stainless steel AISI 304

**5 MOTOR SHAFT** Stainless steel AISI 316L

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>	<i>Elastomer</i>
	<b>FN-KU-24 ISO 3069 EN 12756</b>	<b>Ø 24 mm</b>	Graphite	Ceramic	NBR

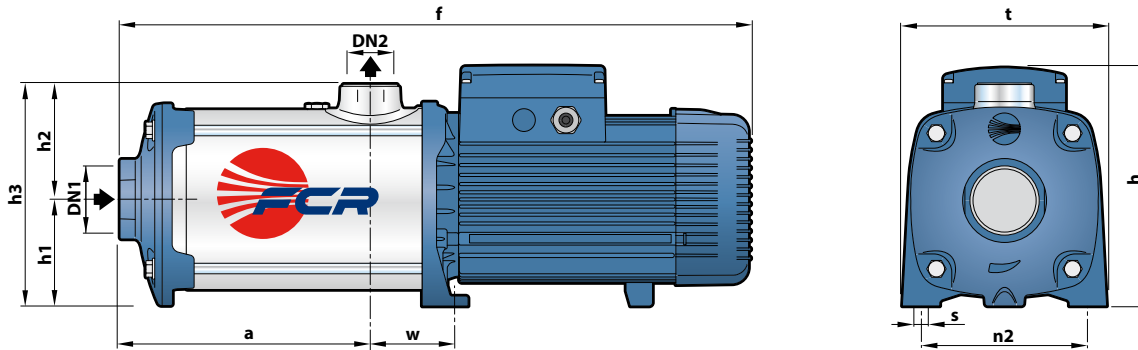
**7 BEARINGS** 6307 ZZ - C3 / 6206 ZZ - C3

**8 ELECTRIC MOTOR** Three-phase 230/400 V - 50 Hz up to 4 kW  
400/690 V - 50 Hz from 5.5 to 7.5 kW  
 ⇒ **The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)**  
 – Insulation: class F  
 – Protection: IP 55



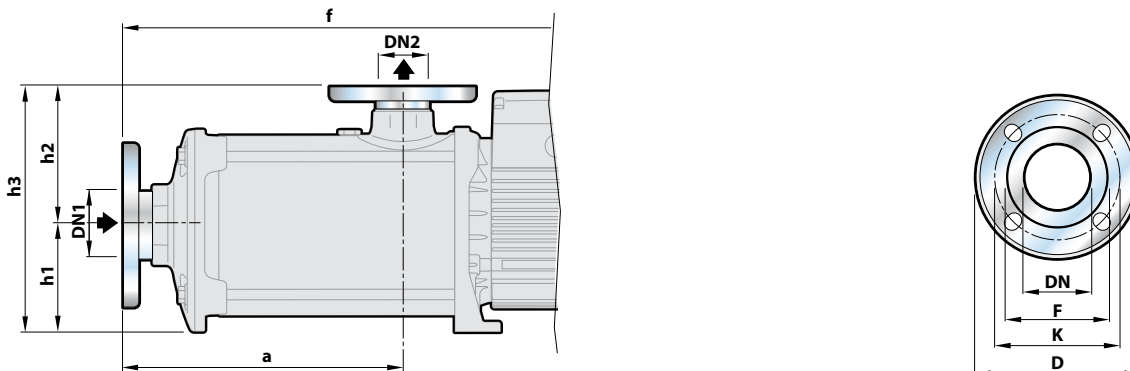
## DIMENSIONS AND WEIGHT

### WITH THREADED PORTS



MODEL	PORTS		DIMENSIONS mm										kg
	DN1	DN2	a	f	h	h1	h2	h3	t	n2	w	s	
Three-phase													3~
FCR 15/2R	2½"	2"	155	533	271	120	132	252	234	190	96	12	34.0
FCR 15/3R			199	577									39.5
FCR 15/3			243	621									40.0
FCR 15/4			286	715	46.0								
FCR 15/5			155	533	271	120	132	252	234	190	96	12	34.0
FCR 30/2R			199	577									37.0
FCR 30/2			243	671									44.0
FCR 30/4			243	671									54.0

### WITH FLANGED PORTS



MODEL	PORTS		DIMENSIONS mm				
	DN1	DN2	a	f	h1	h2	h3
Three-phase							
FCR 15/2R	65	50	189	566	120	165	285
FCR 15/3R			233	610			
FCR 15/3			277	654			
FCR 15/4			320	748			
FCR 15/5			189	566	120	165	285
FCR 30/2R			233	610			
FCR 30/2			276	704			
FCR 30/4			276	704			

FLANGES	D	K	F	HOLES	
				N°	Ø (mm)
DN	mm	mm	mm		
50	165	125	99	4	18
65	185	145	118	4	18

## ABSORPTION

MODEL	VOLTAGE					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
FCR 15/2R	10.4 A	6.0 A	3.5 A	10.0 A	5.8 A	3.3 A
FCR 15/3R	11.8 A	6.8 A	3.9 A	11.3 A	6.6 A	3.8 A
FCR 15/3	15.2 A	8.8 A	5.1 A	14.6 A	8.4 A	4.9 A
FCR 15/4	19.4 A	11.2 A	6.5 A	18.6 A	10.7 A	6.2 A
FCR 15/5	24.4 A	14.1 A	8.2 A	23.4 A	13.5 A	7.8 A
FCR 30/2R	12.2 A	7.0 A	4.1 A	11.7 A	6.7 A	3.9 A
FCR 30/2	15.2 A	8.8 A	5.1 A	14.6 A	8.4 A	4.9 A
FCR 30/3	19.4 A	11.2 A	6.5 A	18.6 A	10.7 A	6.2 A
FCR 30/4	24.4 A	14.1 A	8.2 A	23.4 A	13.5 A	7.8 A