

# 2-5CR 60-80-100

## Multi-stage centrifugal pumps

 Clean water

 Domestic use

 Civil use



### 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 **+40 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure up to **7 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.

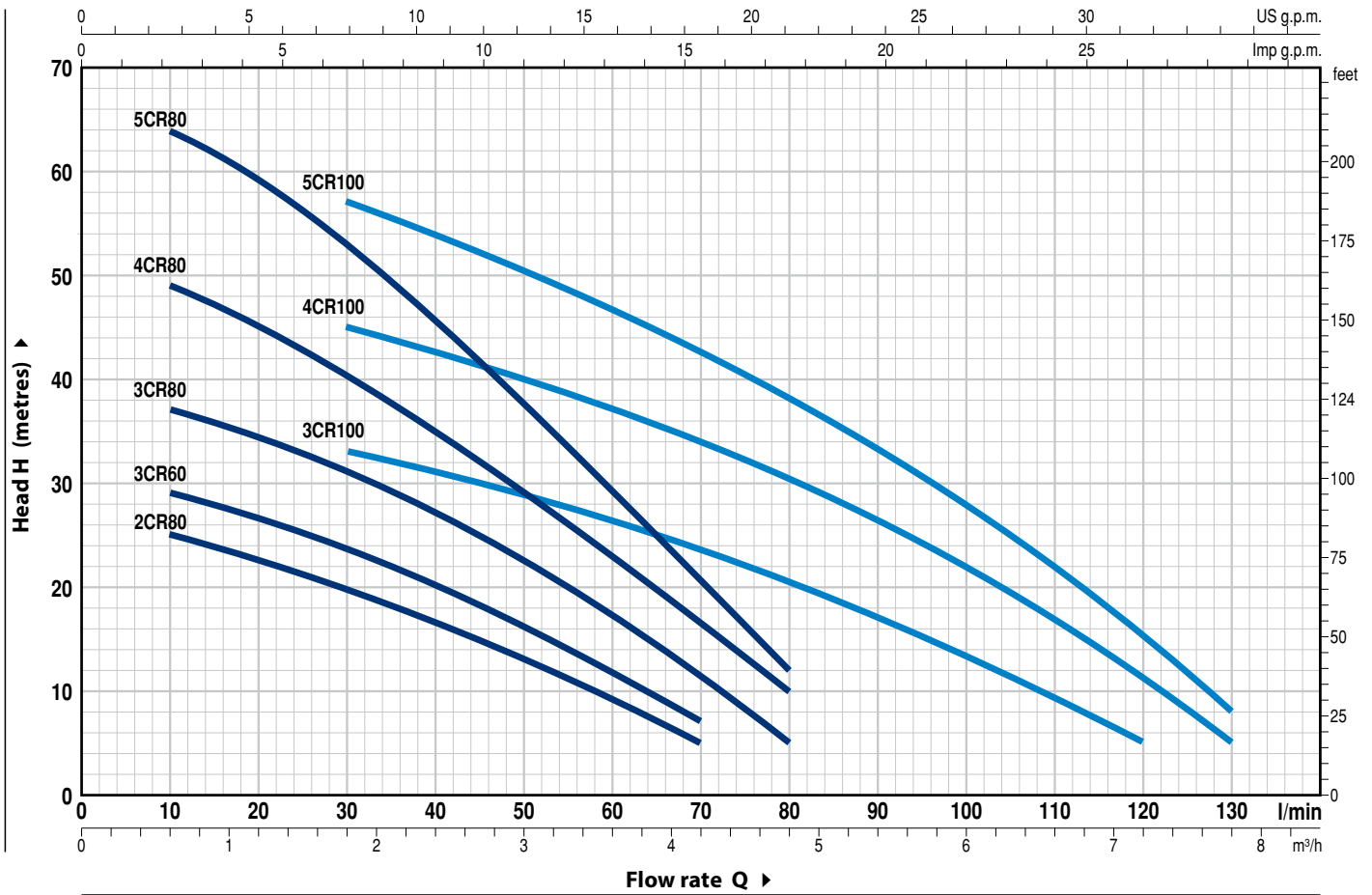
The pump should be installed in an enclosed environment or sheltered from inclement weather.

### OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency

### 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	
2CRm 80	2CR 80	0.37	0.50	H metres	27	26	25	24	22.5	21	20	16.5	13	9	5							
3CRm 60	3CR 60	0.37	0.50		31	30	29	28	26.5	25	23.5	20	16	11.5	7							
3CRm 80	3CR 80	0.45	0.60		40	38	37	36	34.5	33	31	27	22.5	17	11	5						
4CRm 80	4CR 80	0.55	0.75		52	50	49	47	44.5	42	40	34	28.5	22.5	16	10						
5CRm 80	5CR 80	0.75	1		67	66	64	62	59	56	53	45.5	37.5	29.5	20.5	12						
3CRm 100	3CR 100	0.55	0.75		38	37	36	35	34.5	33.5	33	31	28	26	23	20	17	13.5	10	5		
4CRm 100	4CR 100	0.75	1		50	50	49	48	47	46	45	42	39.5	37	34	30.5	26.5	22	17	11	5	
5CRm 100	5CR 100	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

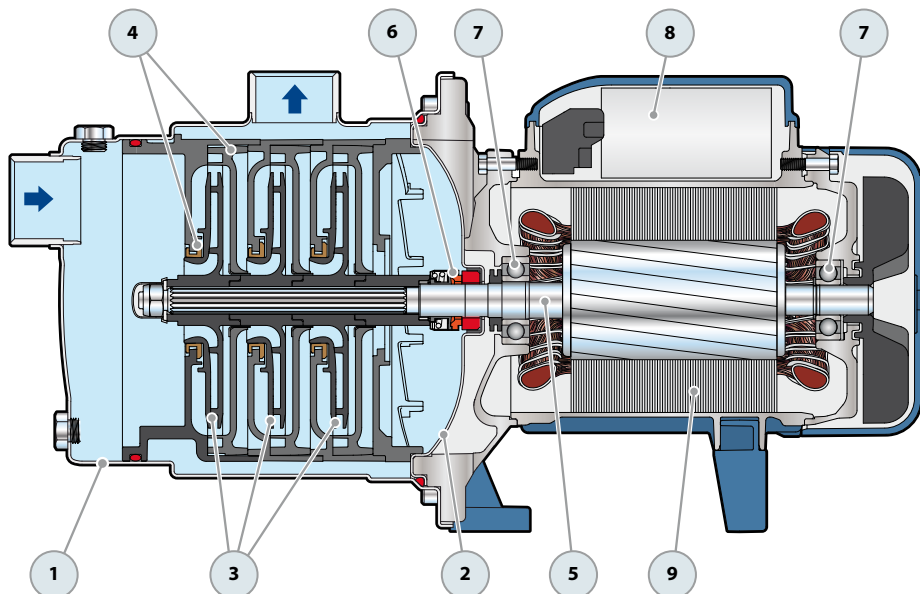
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

▲ Performance class of the three-phase motor (IEC 60034-30-1)

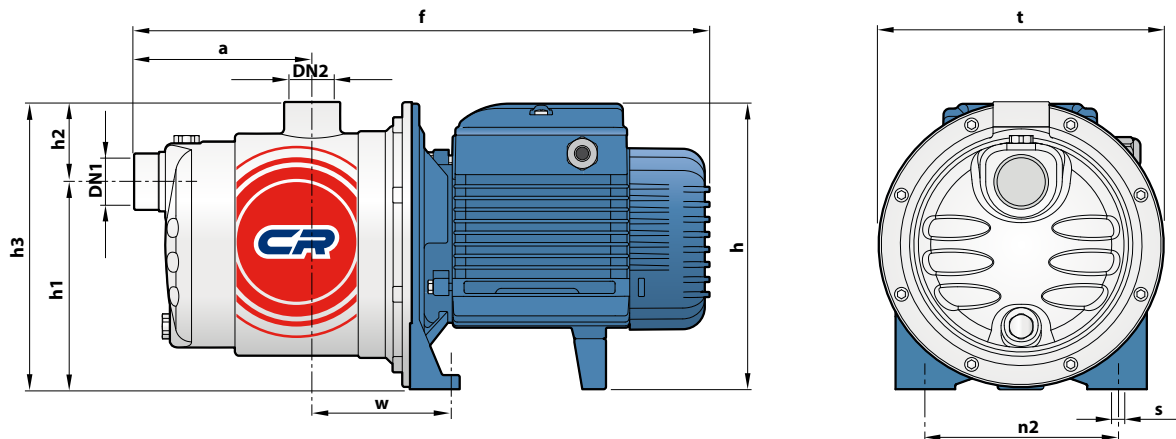
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## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Stainless steel AISI 304 complete with threaded ports in compliance with ISO 228/1				
2	<b>BODY BACKPLATE</b>	Stainless steel AISI 304				
3	<b>IMPELLERS</b>	Noryl FE1520PW				
4	<b>DIFFUSERS</b>	Noryl FE1520PW complete with anti-wear ring				
5	<b>MOTOR SHAFT</b>	Stainless steel EN 10088-3 - 1.4104 (AISI 431 for 4CR 100, 5CR)				
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>Pump</i>	<i>Model</i>			
		2CR 80 3CR 60 3CR 80 4CR 80 3CR 100 4CR 100 5CR 80 5CR 100	6202 ZZ - C3 / 6201 ZZ     6203 ZZ / 6203 ZZ			
8	<b>CAPACITOR</b>	<i>Pump Single-phase</i>	<i>Capacitance (230 V or 240 V)</i>	<i>(110 V)</i>		
		2CRm 80 3CRm 60 3CR 80 4CRm 80 3CRm 100 4CRm 100 5CRm 80 5CRm 100	10 µF - 450 VL 12.5 µF - 450 VL 14 µF - 450 VL 20 µF - 450 VL 25 µF - 450 VL	25 µF - 250 VL 25 µF - 250 VL 25 µF - 250 VL 60 µF - 300 VL -		
9	<b>ELECTRIC MOTOR</b>	<p>2-5CRm: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding.</p> <p>2-5CR: three-phase 230/400 V - 50 Hz.</p> <p>→ <b>The three-phase pumps are fitted with high performance motors up to P<sub>2</sub>=0.55 kW in class IE2 and from P<sub>2</sub>=0.75 kW in class IE3 (IEC 60034-30-1)</b></p> <p>- Insulation: class F - Protection: IP X4</p>				



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg																
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	t	n2	w	s	1~	3~															
2CRm 80	2CR 80	1"	1"	113	367	182	132	51	183	182	120	87	9	6.5	6.5															
3CRm 60	3CR 60													6.5	6.5															
3CRm 80	3CR 80													7.3	7.3															
4CRm 80	4CR 80			138	411	202 *							113	367	182	10	10.7	10.7	9	7.9	7.3									
5CRm 80	5CR 80																					10.7	10.7							
3CRm 100	3CR 100			113	367	182																138	410	202 *	10	10.6	10.6	10	11.0	10.6
4CRm 100	4CR 100			10.6	10.6																									
5CRm 100	5CR 100			11.0	10.6																									

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

## ABSORPTION

MODEL	VOLTAGE		
Single-phase	230 V	240 V	110 V
2CRm 80	2.2 A	2.1 A	4.4 A
3CRm 60	2.4 A	2.3 A	4.8 A
3CRm 80	3.3 A	3.3 A	6.6 A
4CRm 80	3.8 A	3.6 A	7.6 A
5CRm 80	5.5 A	5.2 A	11.0 A
3CRm 100	3.9 A	3.7 A	7.8 A
4CRm 100	6.0 A	6.0 A	12.0 A
5CRm 100	6.3 A	6.1 A	12.6 A

MODEL	VOLTAGE					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
2CR 80	1.7 A	1.0 A	0.6 A	1.7 A	1.0 A	0.6 A
3CR 60	1.7 A	1.0 A	0.6 A	1.7 A	1.0 A	0.6 A
3CR 80	2.5 A	1.5 A	0.9 A	2.4 A	1.4 A	0.8 A
4CR 80	3.4 A	2.0 A	1.2 A	3.3 A	1.9 A	1.1 A
5CR 80	4.3 A	2.5 A	1.4 A	4.1 A	2.4 A	1.3 A
3CR 100	3.4 A	2.0 A	1.2 A	3.3 A	1.9 A	1.1 A
4CR 100	4.0 A	2.3 A	1.3 A	3.8 A	2.2 A	1.3 A
5CR 100	4.3 A	2.5 A	1.4 A	4.2 A	2.4 A	1.4 A

## PALLETIZATION

MODEL		GROUPAGE	CONTAINER
Single-phase	Three-phase	n. pumps	n. pumps
2CRm 80	2CR 80	84	108
3CRm 60	3CR 60	84	108
3CRm 80	3CR 80	84	108
4CRm 80	4CR 80	72	108
5CRm 80	5CR 80	72	108
3CRm 100	3CR 100	84	108
4CRm 100	4CR 100	72	108
5CRm 100	5CR 100	72	108