

2-5CR

Multi-stage centrifugal pumps



2-5CR

Impeller: **stainless steel** AISI 304



2-5CR X

Impeller: **Noryl**

 Clean water

 Domestic use

 Civil use



PERFORMANCE RANGE

- Flow rate up to **130 l/min** (7.8 m³/h)
- Head up to **67 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature:
 - between **-10 °C** and **+60 °C** for 2-5CR
 - between **-10 °C** and **+40 °C** for 2-5CR X
- Ambient temperature up to **+40 °C**
- Max. working pressure **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

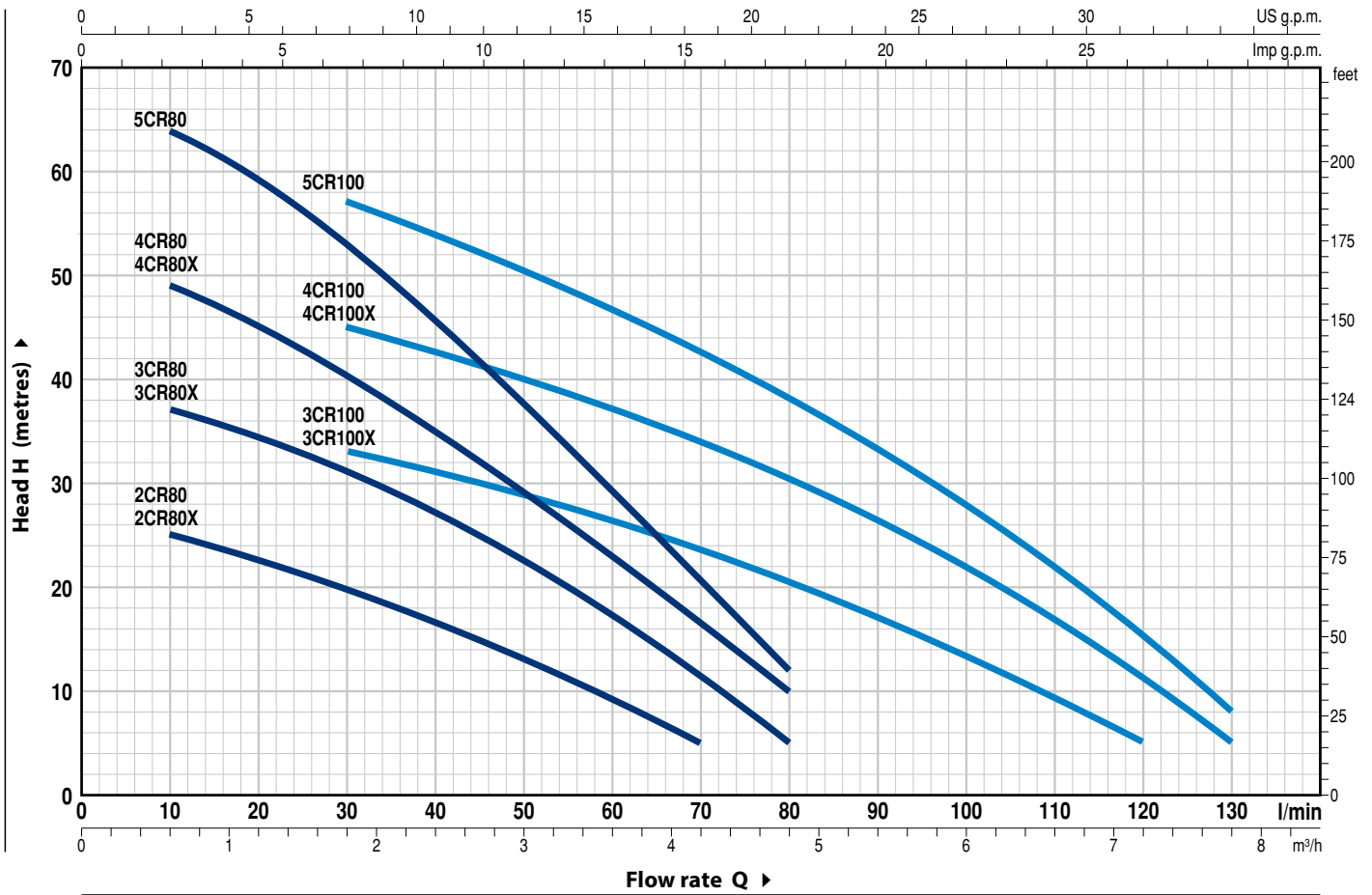
Suitable for use with clean water and with liquids that are not chemically aggressive towards the materials from which the pump is made. As a result of their quietness these pumps are widely used in domestic applications such as the distribution of water in combination with small and medium sized pressure tanks, and for the irrigation of gardens and orchards, etc. Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



MODEL		POWER (P ₂)			Q	Flow rate																				
Single-phase	Three-phase	kW	HP	▲		m ³ /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	IE2	H metres	27	26	25	24	22.5	21	20	16.5	13	9	5										
2CRm 80X	2CR 80X					40	38	37	36	34.5	33	31	27	22.5	17	11	5									
3CRm 80	3CR 80	0.45	0.60			52	50	49	47	44.5	42	40	34	28.5	22.5	16	10									
3CRm 80X	3CR 80X					67	66	64	62	59	56	53	45.5	37.5	29.5	20.5	12									
4CRm 80	4CR 80	0.55	0.75			38	37	36	35	34.5	33.5	33	31	28	26	23	20	17	13.5	10	5					
4CRm 80X	4CR 80X					50	50	49	48	47	46	45	42	39.5	37	34	30.5	26.5	22	17	11	5				
5CRm 80	5CR 80	0.75	1			63	62	61.5	60.5	59.5	58	57	53.5	50.5	46.5	42.5	38	33	28	22	15	8				
3CRm 100	3CR 100					0.55	0.75	50	50	49	48	47	46	45	42	39.5	37	34	30.5	26.5	22	17	11	5		
3CRm 100X	3CR 100X	0.75	1	63	62			61.5	60.5	59.5	58	57	53.5	50.5	46.5	42.5	38	33	28	22	15	8				
4CRm 100	4CR 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				
4CRm 100X	4CR 100X																									
5CRm 100	5CR 100																									

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

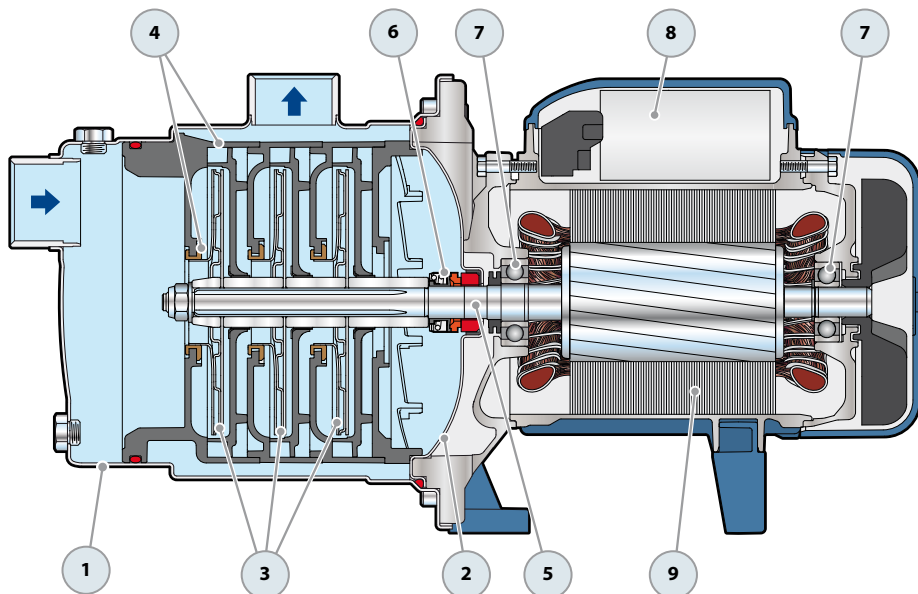
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

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

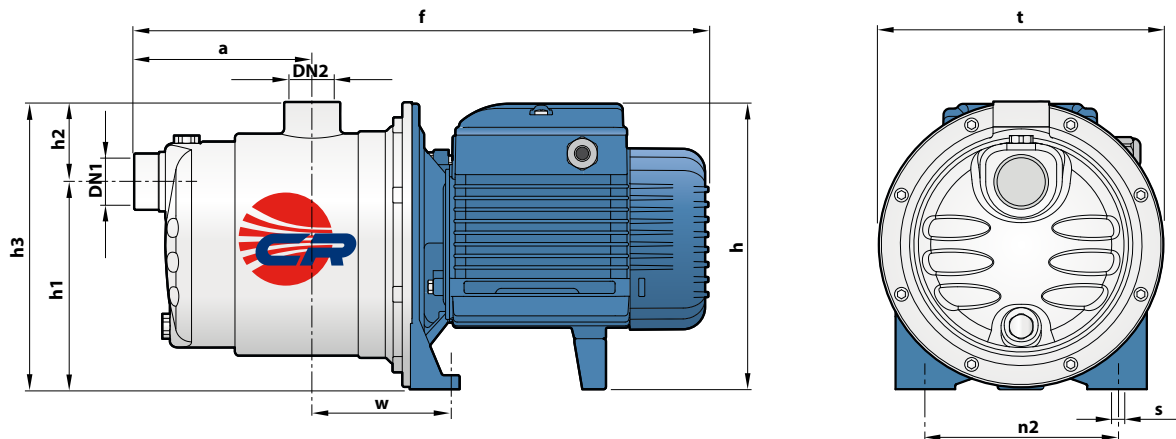
2-5CR

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	Noryl complete with anti-wear ring				
5	MOTOR SHAFT	Stainless steel AISI 431				
6	MECHANICAL SEAL	<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	BEARINGS	<i>Pump</i>	<i>Model</i>			
		2CR 80 3CR 80 4CR 80 3CR 100 4CR 100 5CR 80 5CR 100	6202 ZZ - C3 / 6201 ZZ 6203 ZZ / 6203 ZZ			
8	CAPACITOR	<i>Pump Single-phase</i>	<i>Capacitance (230 V or 240 V)</i>	<i>(110 V)</i>		
		2CRm 80	10 µF - 450 VL	25 µF - 250 VL		
		3CRm 80	12.5 µF - 450 VL	25 µF - 250 VL		
		4CRm 80 3CRm 100	14 µF - 450 VL	25 µF - 250 VL		
		4CRm 100 5CRm 80	20 µF - 450 VL	60 µF - 300 VL		
		5CRm 100	25 µF - 450 VL	60 µF - 300 VL		
9	ELECTRIC MOTOR	<p>2-5CRm: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding. 2-5CR: three-phase 230/400 V - 50 Hz.</p> <p>→ The three-phase pumps are fitted with high performance motors up to P₂=0.55 kW in class IE2 and from P₂=0.75 kW in class IE3 (IEC 60034-30-1)</p> <ul style="list-style-type: none"> - 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	h3	t	n2	w	s	1~	3~
2CRm 80	2CR 80	1"	1"	113	367	182	132	51	183	182	120	87	9	6.6	6.6
3CRm 80	3CR 80														
4CRm 80	4CR 80			138	410	202 *							9	9.1	8.6
5CRm 80	5CR 80														
3CRm 100	3CR 100			10	11.8	11.8									
4CRm 100	4CR 100												9	8.4	7.9
5CRm 100	5CR 100														
													12.5	11.8	

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

ABSORPTION

MODEL	VOLTAGE		
Single-phase	230 V	240 V	110 V
2CRm 80	2.2 A	2.1 A	4.4 A
3CRm 80	3.2 A	3.1 A	6.4 A
4CRm 80	3.9 A	3.7 A	7.8 A
5CRm 80	5.5 A	5.3 A	11.0 A
3CRm 100	3.9 A	3.7 A	7.8 A
4CRm 100	6.0 A	5.8 A	12.0 A
5CRm 100	6.6 A	6.3 A	13.2 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 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

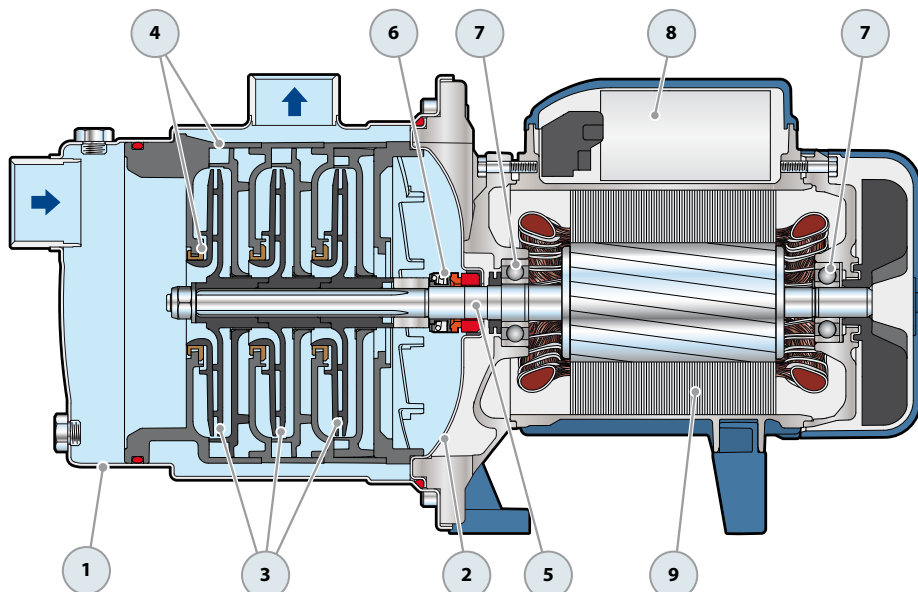
PALLETIZATION

MODEL		GROUPAGE	CONTAINER
Single-phase	Three-phase	n. pumps	n. pumps
2CRm 80	2CR 80	84	108
3CRm 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

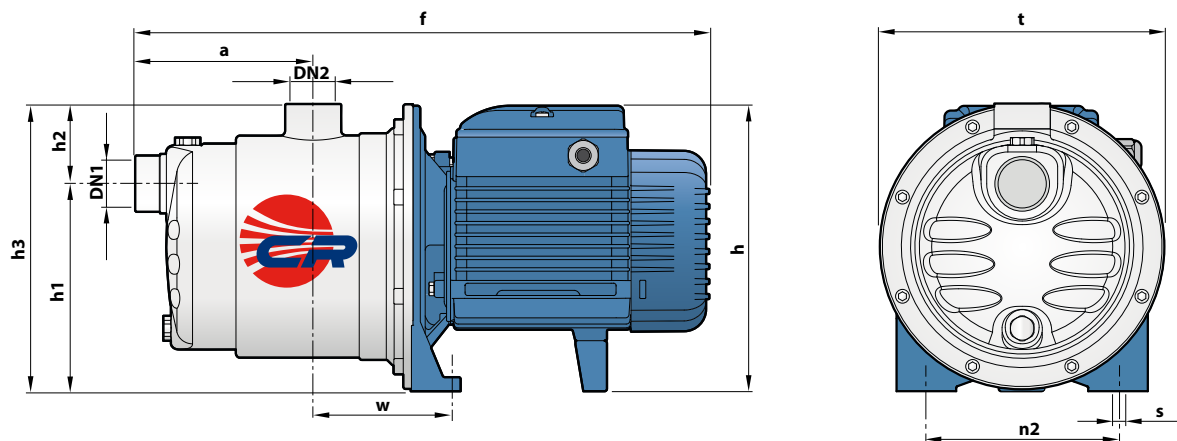
2-5CR X

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6	MECHANICAL SEAL	<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	BEARINGS	<i>Pump Model</i>	<i>Model</i>			
		2CR 80X	6202 ZZ - C3 / 6201 ZZ			
		3CR 80X				
		4CR 80X	6203 ZZ / 6203 ZZ			
8	CAPACITOR	<i>Pump Single-phase</i>	<i>Capacitance (230 V or 240 V)</i>		<i>(110 V)</i>	
		2CRm 80X	10 µF - 450 VL	25 µF - 250 VL		
		3CRm 80X	12.5 µF - 450 VL	25 µF - 250 VL		
		4CRm 80X	14 µF - 450 VL	25 µF - 250 VL		
		3CRm 100X				
		4CRm 100X	20 µF - 450 VL	60 µF - 300 VL		
9	ELECTRIC MOTOR	<p>2-5CRm X: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding. 2-5CR X: three-phase 230/400 V - 50 Hz.</p> <p>➔ The three-phase pumps are fitted with high performance motors up to P₂=0.55 kW in class IE2 and from P₂=0.75 kW in class IE3 (IEC 60034-30-1)</p> <ul style="list-style-type: none"> - Insulation: class F - Protection: IP X4 				



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MODEL		PORTS		DIMENSIONES mm										kg		
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	t	n2	w	s	1~	3~	
2CRm 80X	2CR 80X	1"	1"	113	367	182	132	51	183	182	120	87	9	6.3	6.3	
3CRm 80X	3CR 80X													7.2	7.2	
4CRm 80X	4CR 80X			138	392	8.5								8.0		
3CRm 100X	3CR 100X			113	367	182								9	7.9	7.4
4CRm 100X	4CR 100X			138	410	202 *								10	10.9	10.9

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

ABSORPTION

MODEL	VOLTAGE		
	Single-phase	230 V	240 V
2CRm 80X	2.2 A	2.1 A	4.4 A
3CRm 80X	3.3 A	3.3 A	6.4 A
4CRm 80X	3.8 A	3.6 A	7.8 A
3CRm 100X	3.9 A	3.7 A	7.8 A
4CRm 100X	6.0 A	6.0 A	12.0 A

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

PALLETIZATION

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