

# 2-5CR

## 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 **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  
ISO 14001: ENVIRONMENT AND SAFETY



### 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.

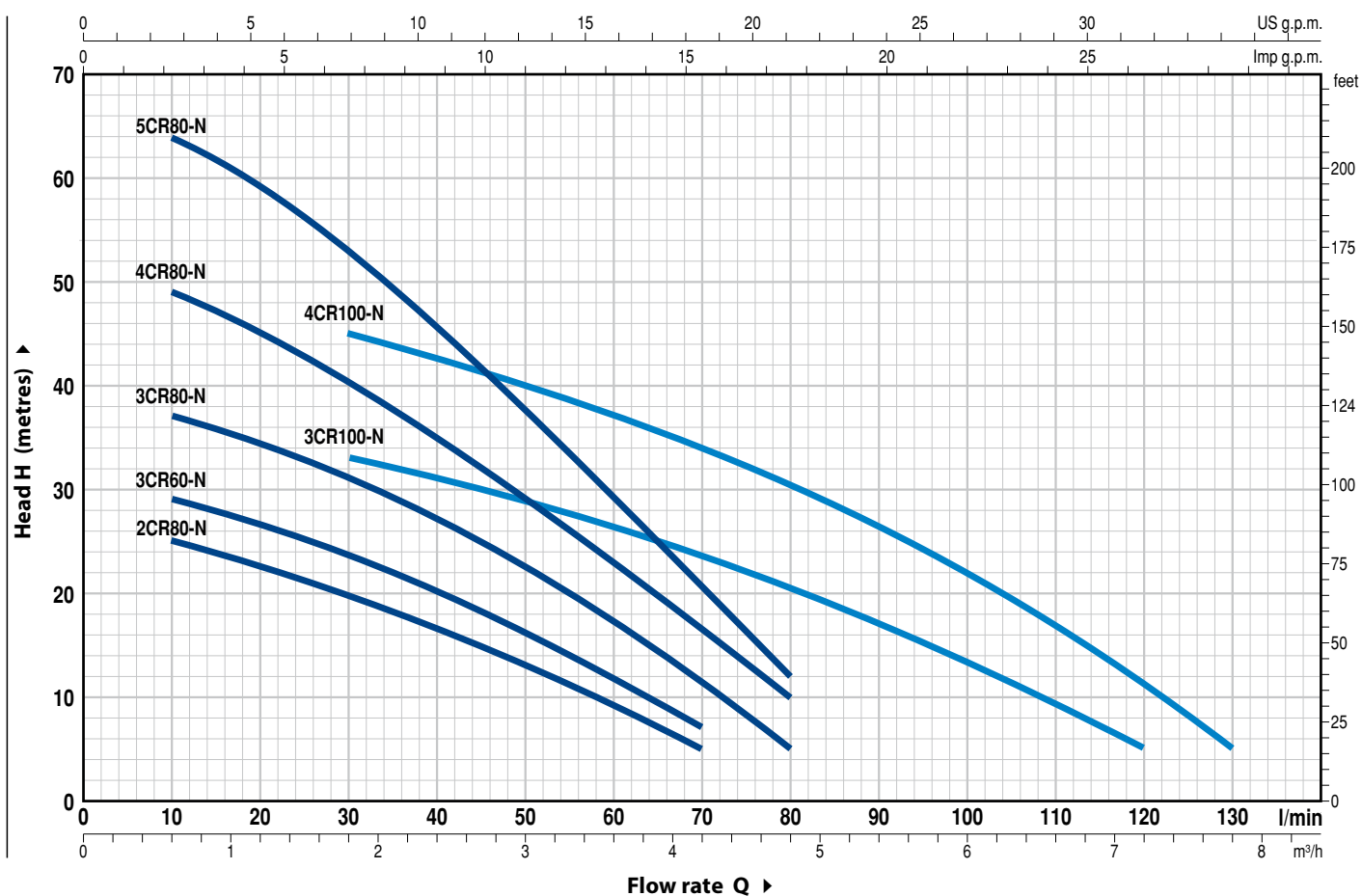
The pump should be installed in an enclosed environment or sheltered from inclement weather.

### OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Other voltages or 60 Hz frequency

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 rpm HS= 0 m

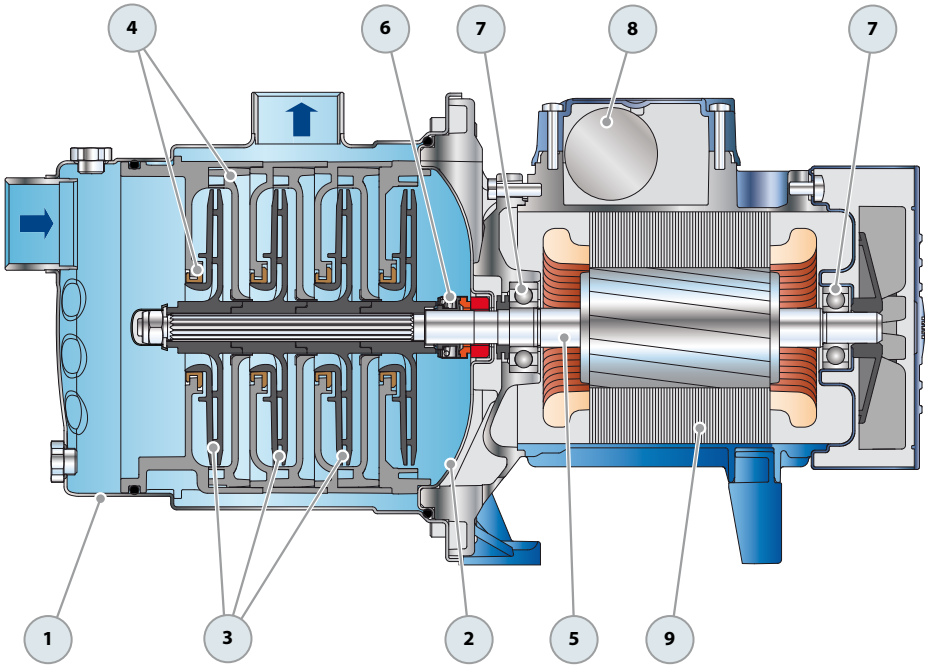


| MODEL        |             | POWER (P <sub>2</sub> ) |      | Q        | m³/h  | 0  | 0.3 | 0.6 | 0.9  | 1.2  | 1.5  | 1.8  | 2.4  | 3.0  | 3.6  | 4.2  | 4.8  | 5.4  | 6.0 | 6.6 | 7.2 | 7.8 |
|--------------|-------------|-------------------------|------|----------|-------|----|-----|-----|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| Single-phase | Three-phase | kW                      | HP   |          | l/min | 0  | 5   | 10  | 15   | 20   | 25   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100 | 110 | 120 | 130 |
| 2CRm 80 -N   | 2CR 80 -N   | 0.37                    | 0.50 | H metres | 27    | 26 | 25  | 24  | 22.5 | 21   | 20   | 16.5 | 13   | 9    | 5    |      |      |      |     |     |     |     |
| 3CRm 60 -N   | 3CR 60 -N   | 0.37                    | 0.50 |          | 31    | 30 | 29  | 28  | 26.5 | 25   | 23.5 | 20   | 16   | 11.5 | 7    |      |      |      |     |     |     |     |
| 3CRm 80 -N   | 3CR 80 -N   | 0.45                    | 0.60 |          | 40    | 38 | 37  | 36  | 34.5 | 33   | 31   | 27   | 22.5 | 17   | 11   | 5    |      |      |     |     |     |     |
| 4CRm 80 -N   | 4CR 80 -N   | 0.55                    | 0.75 |          | 52    | 50 | 49  | 47  | 44.5 | 42   | 40   | 34   | 28.5 | 22.5 | 16   | 10   |      |      |     |     |     |     |
| 5CRm 80 -N   | 5CR 80 -N   | 0.75                    | 1    |          | 67    | 66 | 64  | 62  | 59   | 56   | 53   | 45.5 | 37.5 | 29.5 | 20.5 | 12   |      |      |     |     |     |     |
| 3CRm 100-N   | 3CR 100-N   | 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-N   | 4CR 100-N   | 0.75                    | 1    |          | 50    | 50 | 49  | 48  | 47   | 46   | 45   | 42   | 39.5 | 37   | 34   | 30.5 | 26.5 | 22   | 17  | 11  | 5   |     |

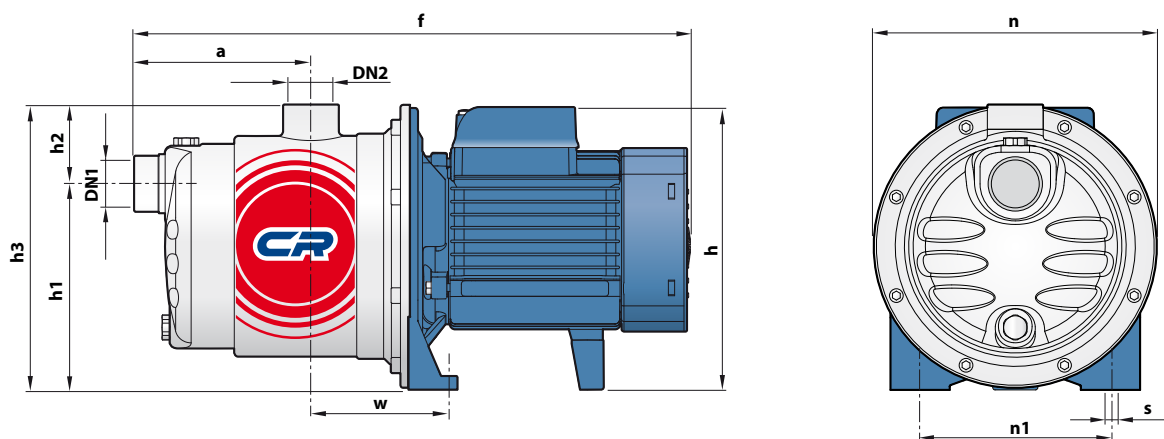
Q = Flow rate H = Total manometric head HS = Suction height

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

| 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       | Noryl FE1520PW  |                              |                 |                           |           |
| 4    | DIFFUSERS       | Noryl complete with anti-wear ring  |                              |                 |                           |           |
| 5    | MOTOR SHAFT     | Stainless steel EN 10088-3 - 1.4104   |                              |                 |                           |           |
| 6    | MECHANICAL SEAL | Seal Model  | Shaft Diameter               | Stationary ring | Materials Rotational ring | Elastomer |
|      |                 | AR-13   | Ø 13 mm                      | Ceramic         | Graphite                  | NBR       |
| 7    | BEARINGS        | Pump  | Model                        |                 |                           |           |
|      |                 | 2CR 80 -N   | 6202 ZZ - C3 / 6201 ZZ       |                 |                           |           |
|      |                 | 3CR 60 -N   |                              |                 |                           |           |
|      |                 | 3CR 80 -N   |                              |                 |                           |           |
|      |                 | 4CR 80 -N   |                              |                 |                           |           |
|      |                 | 3CR 100-N   | 6203 ZZ / 6203 ZZ            |                 |                           |           |
|      |                 | 4CR 100-N   |                              |                 |                           |           |
|      |                 | 5CR 80 -N   |                              |                 |                           |           |
| 8    | CAPACITOR       | Pump Single-phase   | Capacitance (230 V or 240 V) | (110 V)         |                           |           |
|      |                 | 2CRm 80 -N  | 10 µF - 450 VL               | 25 µF - 250 VL  |                           |           |
|      |                 | 3CRm 60 -N  | 12.5 µF - 450 VL             | 25 µF - 250 VL  |                           |           |
|      |                 | 3CRm 80 -N  | 12.5 µF - 450 VL             | 25 µF - 250 VL  |                           |           |
|      |                 | 4CRm 80 -N  | 14 µF - 450 VL               | 25 µF - 250 VL  |                           |           |
|      |                 | 3CRm 100-N  | 14 µF - 450 VL               | 25 µF - 250 VL  |                           |           |
|      |                 | 4CRm 100-N  | 20 µF - 450 VL               | 60 µF - 300 VL  |                           |           |
|      |                 | 5CRm 80 -N  | 20 µF - 450 VL               | 60 µF - 300 VL  |                           |           |
| 9    | ELECTRIC MOTOR  | 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.   |                              |                 |                           |           |
|      |                 | ➡ The three-phase pumps are fitted with high performance motors in class IE2 (IEC 60034-30)       |                              |                 |                           |           |
|      |                 | – 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  | n   | n1  | w  | s  | 1~   | 3~   |
| 2CRm 80 -N   | 2CR 80 -N   | 1"    | 1"  | 113           | 361 | 182 | 132 | 51 | 183 | 182 | 120 | 87 | 9  | 6.5  | 6.5  |
| 3CRm 60 -N   | 3CR 60 -N   |       |     |               |     |     |     |    |     |     |     |    |    | 6.5  | 6.5  |
| 3CRm 80 -N   | 3CR 80 -N   |       |     |               |     |     |     |    |     |     |     |    |    | 7.3  | 7.2  |
| 4CRm 80 -N   | 4CR 80 -N   |       |     | 138           | 411 | 202 |     |    |     |     |     |    | 10 | 8.6  | 7.8  |
| 5CRm 80 -N   | 5CR 80 -N   |       |     |               |     |     |     |    |     |     |     |    |    | 10.6 | 10.6 |
| 3CRm 100-N   | 3CR 100-N   |       |     |               |     |     |     |    |     |     |     |    |    | 9    | 7.9  |
| 4CRm 100-N   | 4CR 100-N   |       |     | 113           | 386 | 202 |     |    |     |     |     |    | 10 | 10.2 | 10.2 |

## ABSORPTION

| MODEL        | VOLTAGE |       |        |
|--------------|---------|-------|--------|
| Single-phase | 230 V   | 240 V | 110 V  |
| 2CRm 80 -N   | 2.2 A   | 2.1 A | 4.4 A  |
| 3CRm 60 -N   | 2.4 A   | 2.3 A | 4.8 A  |
| 3CRm 80 -N   | 3.3 A   | 3.1 A | 6.6 A  |
| 4CRm 80 -N   | 4.1 A   | 4.0 A | 8.2 A  |
| 5CRm 80 -N   | 5.5 A   | 5.2 A | 11.0 A |
| 3CRm 100 -N  | 4.1 A   | 4.0 A | 8.2 A  |
| 4CRm 100 -N  | 6.0 A   | 5.8 A | 12.0 A |

| MODEL       | VOLTAGE |       |       |       |       |       |
|-------------|---------|-------|-------|-------|-------|-------|
| Three-phase | 230 V   | 400 V | 690 V | 240 V | 415 V | 720 V |
| 2CR 80 -N   | 1.7 A   | 1.0 A | 0.6 A | 1.6 A | 0.9 A | 0.5 A |
| 3CR 60 -N   | 1.7 A   | 1.0 A | 0.6 A | 1.6 A | 0.9 A | 0.5 A |
| 3CR 80 -N   | 2.5 A   | 1.5 A | 0.9 A | 2.4 A | 1.4 A | 0.8 A |
| 4CR 80 -N   | 3.4 A   | 2.0 A | 1.2 A | 3.3 A | 1.9 A | 1.1 A |
| 5CR 80 -N   | 4.3 A   | 2.5 A | 1.4 A | 4.1 A | 2.4 A | 1.3 A |
| 3CR 100 -N  | 3.4 A   | 2.0 A | 1.2 A | 3.3 A | 1.9 A | 1.1 A |
| 4CR 100 -N  | 4.5 A   | 2.6 A | 1.5 A | 4.3 A | 2.5 A | 1.4 A |

## PALLETIZATION

| MODEL        |             | GROUPAGE | CONTAINER |
|--------------|-------------|----------|-----------|
| Single-phase | Three-phase | n. pumps | n. pumps  |
| 2CRm 80 -N   | 2CR 80 -N   | 84       | 120       |
| 3CRm 60 -N   | 3CR 60 -N   | 84       | 120       |
| 3CRm 80 -N   | 3CR 80 -N   | 84       | 120       |
| 4CRm 80 -N   | 4CR 80 -N   | 84       | 120       |
| 5CRm 80 -N   | 5CR 80 -N   | 72       | 96        |
| 3CRm 100 -N  | 3CR 100 -N  | 84       | 120       |
| 4CRm 100 -N  | 4CR 100 -N  | 72       | 96        |