

OPERATING AND MAINTENANCE MANUAL PART 2
THE USER SHOULD KEEP THIS DOCUMENT

1. INTRODUCTION

This instruction manual is split into two booklets: PART 1, containing general information regarding our whole product range; and PART 2, containing information specific to the motor-driven pump you have purchased. The two publications are complementary to each other, so make sure you have both.

Comply with the instructions contained in them to get the most out of your motor-driven pump and assure its proper operation. If you need further information, get in touch with your nearest authorized dealer.

If information in the two parts contradict each other, take PART 2 containing the product's specific information as valid.

NO PART OF THESE ILLUSTRATIONS AND/OR TEXT MAY BE REPRODUCED FOR ANY REASON.

The following symbols have been used in the compilation of this instruction booklet:

WARNING (WARNING) Risk of damaging the pump or system



Risk of causing injury or damaging property



Electrical hazard

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3. DESCRIPTION AND USE OF MOTOR-DRIVEN PUMP

3.1. DESCRIPTION

Description: **MOTOR-DRIVEN SURFACE PUMPS**
Type: **CENTRIFUGAL**
Model: **CDX - CD -DWO - DWC-V - DWC-N, 2CD 2CDX (Dual-impeller), CMA-CMB-CMC-CMD-CMR, CDA (Dual-impeller)**

3.2. USE FOR WHICH PUMPS ARE DESIGNED

These motor-driven pumps are suitable for pumping clean water and other liquids compatible with stainless steel or cast iron, namely:

CDX, 2CDX, CD, 2CD

Domestic water boosting, small-scale garden watering, washing, treatment of clean water in general (damp and salty environments CD, 2CD).

DWO

- Washing vegetables, fish, shellfish and suchlike;
- washing and surface finishing systems for metal parts etc...
- washing systems for bottles, jars, glass containers, crates, baskets etc...
- dishwashers, glasswashers, cup washers for communities, hospitals and so on;
- end-of-cycle washing systems in a diversity of industries;
- spray booths;
- flood irrigation;
- handling, removal and transfer of liquids (including liquids containing solids).

DWC

- chillers;

- cooling and heating systems;
- industrial liquid pumping.

CMA-CMB-CMC-CMD-CMR-CDA

They can be used to meet demands for low, medium and high delivery rates. Suitable for domestic, farming, commercial and industrial uses, for the automatic distribution of water by means of small and medium pressure vessel tanks, for sprinkler and flood irrigation, for increasing mains water pressure in branch pipes, for complex machinery for industrial use.

Use the motor-driven pumps based on their technical specifications.

3.3. USE FOR WHICH PUMPS ARE NOT DESIGNED

The pumps cannot be used to handle:

- dirty water or water with solids in suspension for (2)CD(X);
- water containing acids or bases, and corrosive liquids in general (for cast iron pumps);
- water with a temperature over the temperature limit given in chap. 4;
- seawater;
- flammable liquids and hazardous liquids in general.

The motor-driven pumps must never be made to work without liquid.

4. SPECIFICATIONS

4.1. CDX, 2CDX, CD, 2CD PUMP SPECIFICATIONS

| | U/M | CD-CDX | CD-2CD 70/05-70/07- 90/10 | CDX- 2CDX | CDH-2CDH- CDXH-2CDXH |
|--|-----|-----------------|---------------------------------|--------------|-------------------------|
| Max. temperature of liquid pumped (domestic use) | °C | 90 | 60 | | 110 |
| | U/M | CD-2CD-CDX-2CDX | CD-2CD 300 CDX-2CDX 200 | | |
| Suction diameter | * | G1 ¼ | | G1 ½ | |
| Delivery diameter | * | G1 | | | |
| Maximum working pressure | MPa | 0.8 | | | |

4.2. DWO - DWC PUMP SPECIFICATIONS

| | U/M | DWO | DWC-V | DWC-N |
|-----------------------------------|-----|--|-----------------|-------|
| Max. temperature of liquid pumped | °C | 90 | | |
| Suction diameter | * | G2 (DWO 150-200) G2 ½ (DWO 300-400) | VICTAULIC G2 | G2 |
| Delivery diameter | * | G2 | VICTAULIC G2 | G2 |
| Maximum working pressure | MPa | 0.8 | | |
| Type of impeller | | open | closed | |

4.3. CMA - CMB PUMP SPECIFICATIONS

| | U/M | CMA | CMB |
|-----------------------------------|-----|--|---|
| Max. temperature of liquid pumped | °C | 40 (050-075-080-100) 90 (150-200-300) | 90 |
| Suction diameter | * | G1 (050-075-080-100) G1 ¼ (150-200-300) | G2 |
| Delivery diameter | | G1 | G1 ¼ |
| Maximum working pressure | MPa | 0.6 (050-075-080-100) 0.8 (150-200-300) | 0.6 (075-100-150-200- 300) 0.8 (400-550) |

4.4. CMC - CMD PUMP SPECIFICATIONS

| | U/M | CMC | CMD |
|-----------------------------------|-----|------|------|
| Max. temperature of liquid pumped | °C | 90 | |
| Suction diameter | * | G2 | G2 ½ |
| Delivery diameter | | G2 ½ | |
| Maximum working pressure | MPa | 0.6 | |

4.5. CMR - CDA PUMP SPECIFICATIONS

| | U/M | CMR | CDA |
|--|-----|------|--|
| Max. temperature of liquid pumped (domestic use) | °C | 90 | 40 (075-100) 90 (150-200-300-400-550-750) |
| Suction diameter | * | G1 ½ | G1 (075-100) G1 ¼ (150-200-300) G1 ½ (400-550-750) |
| Delivery diameter | | | G1 (075-100-150-200-300) G1 ¼ 400-550-750) |
| Max. working pressure | MPa | 0.6 | 0.6 (075/100) 1 (150-200-300-400-550-750) |

* = threading according to ISO 228

4.6. MOTOR SPECIFICATIONS

| | |
|---------------------|--|
| TYPE | TEFC |
| RATINGS | See motor-driven pump rating plate |
| OVERLOAD PROTECTION | SINGLE PHASE: thermal cutout w/ automatic reset THREE PHASE: by installer |

4.7. INFORMATION ON AIRBORNE NOISE

| Pump | P2 [kW] | Shaft height | LpA [dB] (A)* |
|-----------|----------|--------------|---------------|
| CD(X) | 0.37-1.8 | 71-80 | <70 |
| 2CD(X) | 0.75-3.7 | 71-90 | <70 |
| DWO-DWC | 1.1-3.0 | 80-90 | <70 |
| CM-CDA | 0.25-2.2 | 63-80 | <70 |
| CMB - CDA | 3 - 4 | 100 | 72 |

The table gives maximum sound emission values for the motor-driven pumps

* **Sound pressure level - Mean value of measurements taken one metre from the pump. Tolerance ± 2.5 dB.**

5. PREPARING FOR USE

5.1. FILLING THE PUMP CD(X) - 2CD(X)

WARNING OPERATION TO BE PERFORMED WITH THE MOTOR'S TERMINAL STRIP FULLY CLOSED.

- Unscrew the hexagonal cap (1-2) located on the front of the pump casing (see chap. 6 FIG. 1 and 2).
- With the aid of a funnel, fill the pump with water to overflowing.
- Screw the hexagonal cap back on until it is locked tight to prevent air getting in.

GB

5.2. FILLING THE PUMP DWO - DWC - CM - CDA

WARNING OPERATION TO BE PERFORMED WITH THE MOTOR'S TERMINAL STRIP FULLY CLOSED.

- Make sure the foot valve (3-4-5) is not obstructed. (see chap. 6 FIG. 3,4,5).
- Switch on and off two or three times to check operating conditions.
- Begin continuous duty and gradually open the delivery gate valve.