

Manual # 451
plant # 1430001

pump VORTEX 2" 240 volt auto.



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I DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Istruzioni installazione ed uso - Sicurezza -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Dichiarazione di conformità

ENGLISH

GB DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instructions for installation and use - Safety -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Declaration of conformity

F DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instructions pour installation et l'emploi -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Sécurité - Déclaration de conformité

D DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Installations- und Bedienungsanleitungen -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Sicherheit - Konformitätserklärung

E DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instrucciones de instalación y uso.
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Seguridad. Declaración de Conformidad.

P DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instruções instalação e uso - Segurança -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Declaração de conformidade

NL DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Aanwijzingen voor de installatie en het
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV gebruik - Veiligheidsvoorschriften -
Verklaring van overeenstemming

DK DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instruktionser vedrørende installation og brug
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV - Sikkerhed - Overensstemmelseserklæring

S DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instruktionser för installation och användning -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Säkerhet - Försäkran om överensstämmelse

N DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instruksjoner for installasjon og bruk -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Sikkerhet - Overensstemmelseserklæring

SF DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Asennus- ja käyttöohjeet - Turvallisuus -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV vakuutus yhdenmukaisuudesta

GR DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Οδηγίες εγκατάστασης και χρήσης -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Ασφάλεια - Δήλωση συμμόρφωσης

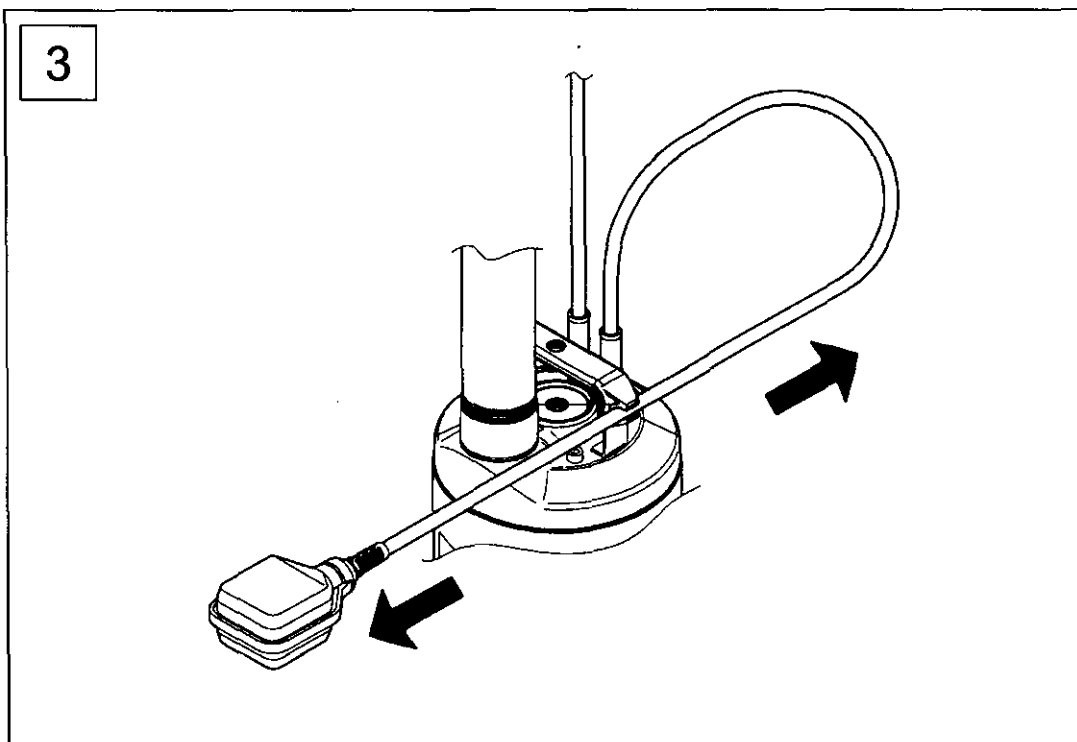
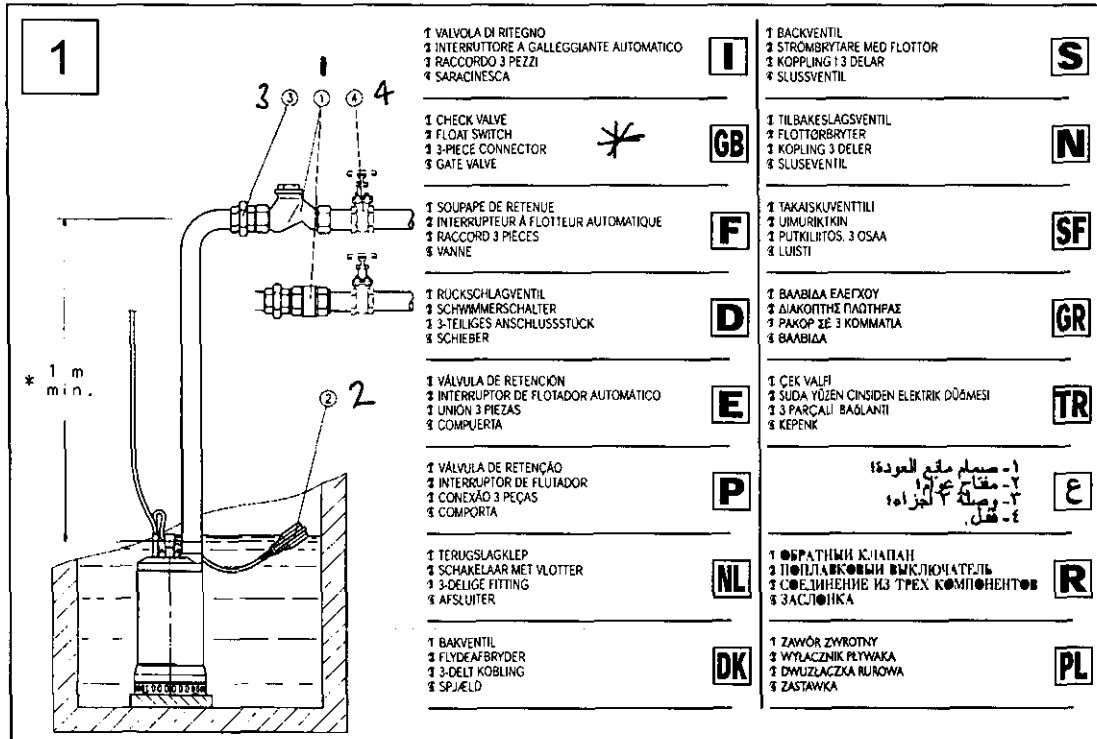
TR DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Yerleşirme ve kullanım bilgileri - Emniyet
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Uygunluk beyanı

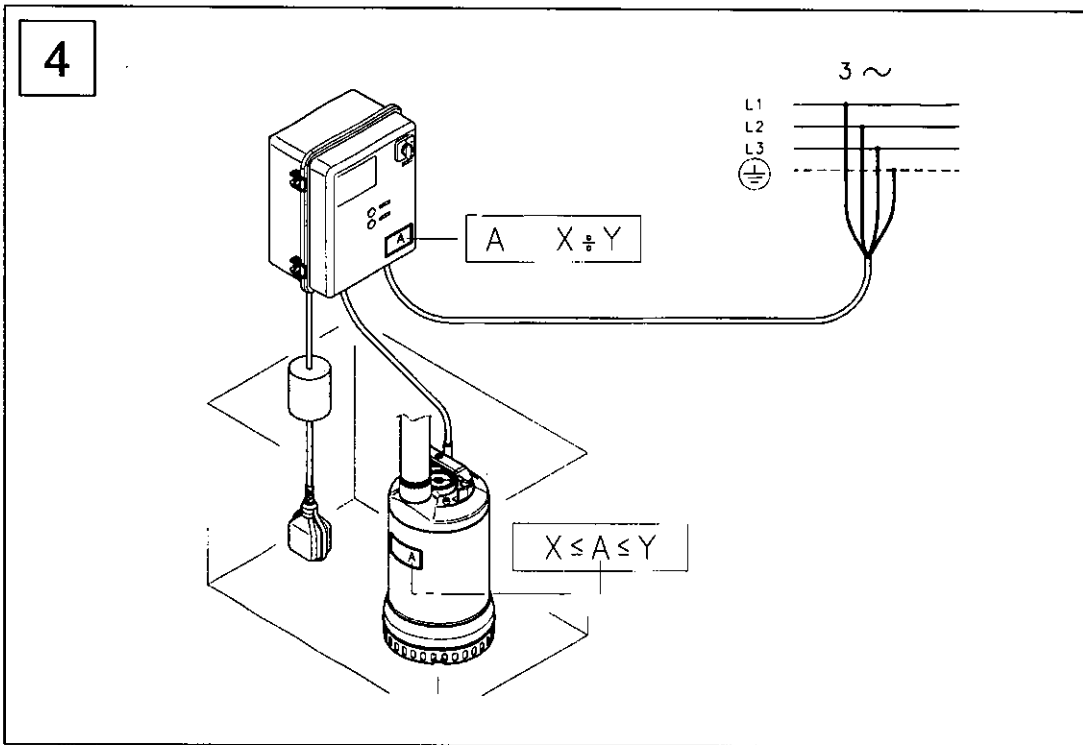
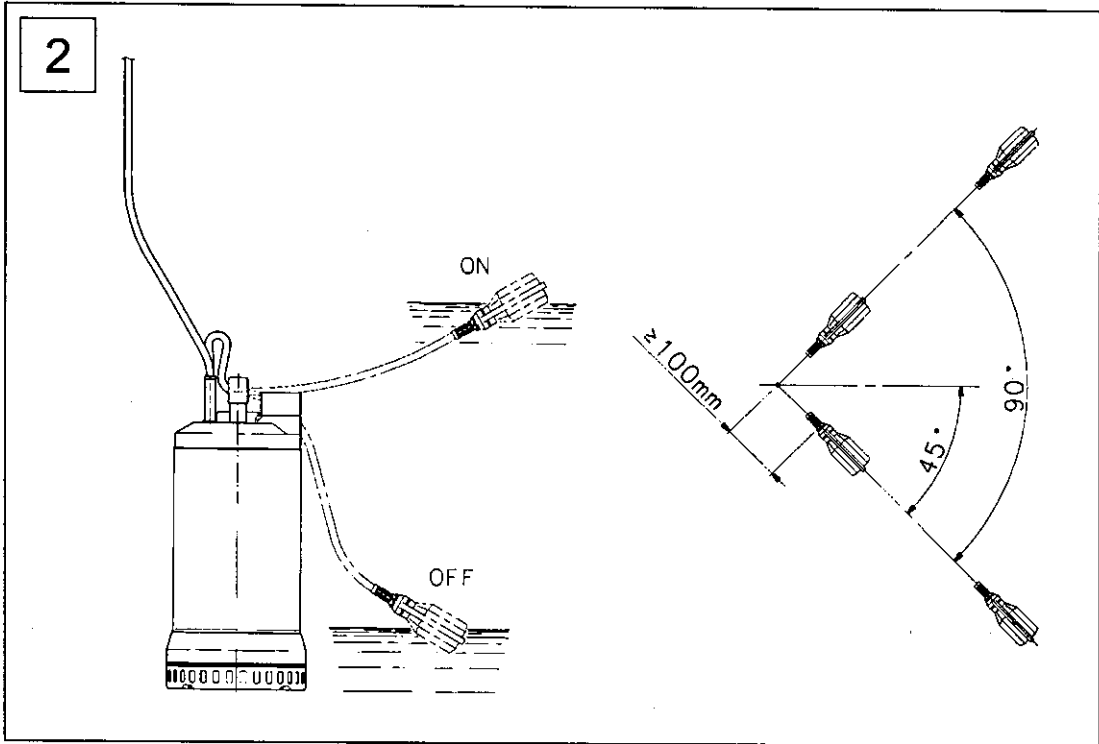
ع DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - تعليمات التركيب والاستخدام والأمان
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV تصريح صناعة طبق الأصول

R DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Инструкции по установке и эксплуатации -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Безопасность - Декларация соответствия

PL DIP-DOC-DOCVX-DOMO-DOMOVX-DIWA - Instrukcja obsługi - Zasady Bezpieczeństwa -
DN-DL-DLV-VORTEX-MINIVORTEX-GL-GLV Deklaracja zgodności

- * 1. check valve
- 2. Float switch
- 3. 3-piece connector
- 4. gate valve





GB 1. HANDLING

The product must be lifted and handled with care, using the handle or the eyebolt.

2. APPLICATIONS

The pump is suitable for the transfer of clean, dirty or turbid liquids, with suspended solids not exceeding the dimensions indicated below. The most common uses are: drainage of domestic wastewater collection tanks, of rainwater collection tanks, of flooded rooms, of excavations and trenches in the building industry. The versions with the VORTEX impeller are also suitable for liquids with suspended filaments.

3. WORKING LIMITS



EN standard 60335-2-41 forbids the use of the pump in tanks or swimming pools while people are in the water, and requires the use of the 10 m cable version for external applications.

Liquid temperature: $\leq 35^{\circ}\text{C}$.

N.B. When operating continuously the pumps must be entirely submersed, with the exception of the DOC and DIWA models.

Maximum immersion depth: 5 m (7 m for the DIWA models)

Max. diameter of suspended solids (mm)

DN	DIP-DIWA	DOC	DOCVX	DOMO 7	DL80, 90 105 VORTEX- MINIVORTEX	DOMO 10, 15 DL109, 125 GL, DLV 100, 115 GLV
5	8	10	20	35	45	50

Max. number of starts per hour

DN-DL-DLV-GL-GLV VORTEX-MINIVORTEX	DIWA-DOMO	DOC-DIP
20	25	40

4. INSTALLATION (typical diagram FIG. 1)

The well dimensions must be such as to prevent an excessive number of starts per hour (FIG. 2). The float is adjusted by increasing or diminishing the free length of the cable (FIG. 3).



Improper adjustments may cause malfunctions.

5. ELECTRICAL CONNECTION

SINGLE-PHASE VERSIONS: insert the plug in a standard power outlet.

NOTE: The single-phase version electric pumps are fitted with a built-in automatic reset magneto-thermal protection.

THREE-PHASE VERSION: FIG. 4

5.1 Direction of rotation (only for three-phase version)

The proper rotation direction is clockwise when looking at the pump from above. Check by observing the pump performance.

The correct direction of rotation is the one that generates higher Q/H performances for single-channel and double-channel versions, and lower rates of absorption for the VORTEX impeller versions.

6. MAINTENANCE



The pump should be serviced by qualified personnel only, and after having been disconnected from the power mains.

The pump does not require any routine maintenance. It may occasionally be necessary to clean the suction screen (DIP-DOC-DIWA-DN) or the impeller. To access the impeller on models equipped with a screen, loosen the screws that fasten the screen.

GB 7. SAFETY INSTRUCTIONS

FIG. 5 The pump is not suitable for use with flammable or dangerous liquids.

FIG. 6 Do not use the power supply cable to lift or move the pump.

FIG. 7 Do not allow the pump to run dry or operate out of the water.

FIG. 8 As the pump can start and stop automatically, never insert your hands or other objects in it while it is connected to the power mains.

FIG. 9 The power plug and capacitor carrier (if any) must never be submerged.

FIG. 10 Pay attention to the working limits. Improper use may damage the pump and other property, and injure people.

FIG. 11 Make sure that the rated voltage matches the mains voltage.

FIG. 12 If the pump is a three-phase model, make sure that the mains connection and grounding are performed by qualified personnel (certified electrician).

FIG. 13 As additional protection from lethal electric shock, install a high sensitivity differential switch (0.03 A).

FIG. 14 Make sure that unauthorized persons do not have access to the pump.

FIG. 15 Disconnect the electric pump, or unplug it (for models fitted with a plug) before moving it or carrying out any maintenance or cleaning operations.

FIG. 16 Use the pump only within the specified limits shown on the rating plate.

FIG. 17 Caution! Avoid icing.

FIG. 18 Protect the pump from clogging.

FIG. 19 Prevent any accidental power failure (for example, use a battery operated back-up power supply).

FIG. 20 Wear gloves during any pump servicing operations.

8. TROUBLESHOOTING

THE PUMP DOES NOT START: • Make sure that the plug is properly inserted in the power socket and that the line is live. Reset the ground fault interrupter or circuit breaker, if it has kicked off. • The thermo-ampereometric protection incorporated in the single-phase versions may have activated; it will reset automatically after a few minutes, once the motor has cooled. If any one of the three protections mentioned above kicks off again, call a qualified electrician.

THE MOTOR STARTS BUT THE PUMP DOES NOT DELIVER: • Make sure that the water level is not too low and that the suction port or delivery pipe are not clogged.

THE PUMP'S DELIVERY IS REDUCED: • Check for clogs and make sure that the rotation direction on the three-phase models is correct.

THE PUMP WORKS INTERMITTENTLY: • The float is positioned incorrectly • The well is too small • Excessive power consumption • Clogged pump or pipes.

9. NOISE

Not applicable when the pump works completely submerged; in any case, below 70 dB(A) if the pump is operating partially submerged.

10. DECLARATION OF CONFORMITY

PRODUCTS: DIP-DOC-DOGVX-DOMO-DOMOVX-DIWA-DN-DI-DLV-VORTEX-MINIVORTEX-GL-GLV

Manufactured by **LOWARA - Montecchio Maggiore (VI) - Italy**

The products listed above comply with the safety prescriptions of Machine Directive 98/037/EEC, Low Voltage Directive 73/23/EEC and related addenda, European Standard EN 60204-1, Electromagnetic Compatibility Directive 89/336/EEC and related addenda.


SIGNATURE/TITLE: Amedeo Valente (Director of Engineering)

