

# **TF TUBMAN**

## **TM-P50X-1127**



**NOM**

### **PERIPHERIAL MOTOR PUMP**

V1.0

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## Abstract

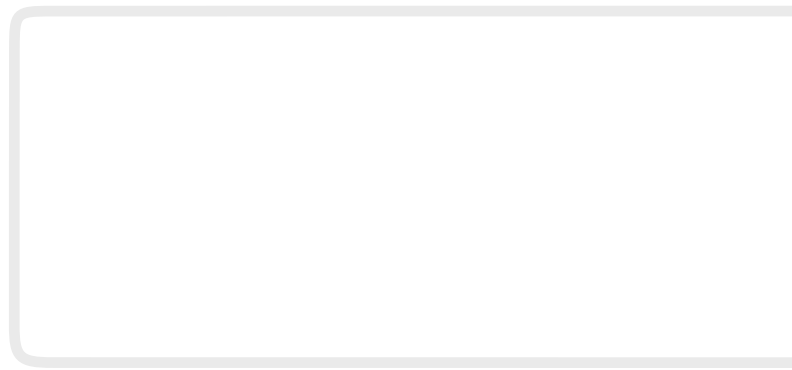
### INSTALLATION MANUAL

Thank you for choosing our TUBMAN peripheral motor pumps.

This manual is designed to guide you through the proper installation and operation of the product. We recommend following the instructions provided to ensure correct setup and use. Please store this manual in a safe place for future reference.

The information contained in this document may change without notice

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## Table of Contents

1. INTRODUCTION .....	4
2. SAFETY AND WARNINGS .....	4
3. PRELIMINARY CHECK .....	4
4. TERMS OF USE .....	4
5. INSTALLATION .....	5
5.1. HYDRAULIC INSTALLATION .....	5
5.1.1. INSTALLATION DIAGRAM .....	7
5.2. ELECTRICAL INSTALLATION .....	8
5.3. START-UP .....	8
6. MAINTENANCE .....	9
7. POSSIBLE FAULTS, CAUSES AND SOLUTIONS .....	10
8. USES AND PROHIBITIONS .....	11

## 1. INTRODUCTION

TUBMAN® peripheral motor pumps are equipped with an integrated electric motor and are designed to operate with clean water. They are primarily used for water supply to residential areas, installation in small hydro-pneumatic units, and for pumping water into tanks.

## 2. SAFETY AND WARNINGS



### CAUTION

- Use only for clean, solid-free water applications, and the temperature of the liquid to be pumped should not exceed 122°F (50°C).
- This device is not intended for use by persons (including children) with reduced physical, sensory, or mental abilities, or who lack experience or knowledge, unless they receive supervision or training.
- Children should be supervised to ensure they do not play with the motor pump.
- When storing, do not place heavy objects on the packaging box.
- If the power cord is damaged, immediately contact your authorized dealer for replacement to avoid danger.
- Protect the electrical installation and motor pump from flooding, excessive heat, and hazardous substances

## 3. PRELIMINARY CHECK

Unpack the motor pump and ensure it is in good condition. Any damage such as dents or cracks may affect its operation. After reviewing the data plate information, if any irregularities are found, contact your authorized dealer directly to report the defect.

## 4. TERMS OF USE

The following conditions must be observed when using the motor pump:

- Suitable temperature range of the liquid to be pumped: from 41°F (5°C) to 122°F (50°C).
- Maximum ambient temperature: 122°F (50°C).
- The motor pump is not suitable for pumping flammable liquids, or for operating in areas where there is a risk of explosion.
- Work cycles: 30 minutes of work x 15 minutes of rest, maximum 6 hours a day.

## 5. INSTALLATION

Before installing and starting to use the motor pump, carefully read the instructions included in this manual. In the event of accidents or damage caused by failure to follow the instructions described here and the information provided on the motor pump's data plate, the manufacturer is exempt from all liability due to improper use of the equipment. We recommend that you keep this manual in a safe place for future reference.

The installation must be done on a solid, horizontal base. The motor pump must be securely fixed with screws, preferably stainless steel. The base of the motor pump is equipped with 1/4" holes designed for mounting and fixing the unit.

The installation of the motor pump must be carried out in a dry area, free from moisture and dust, with good ventilation.

The installation may be complex. Therefore, the start-up should be performed by a competent and authorized installer.

### 5.1. HYDRAULIC INSTALLATION

The suction pipe must have a diameter equal to or greater than that of the motor pump connection, permanently maintaining a minimum upward slope of 2% to avoid air bubbles.

For the discharge pipe, it is recommended to use pipes with a diameter equal to or larger than that of the motor pump's discharge connection to reduce pressure losses in long sections of pipes.



#### NOTE

Pipes should always be installed using support brackets to prevent their weight from resting on the motor pump.

Install the motor pump as close to the water supply as possible. The diameter of the suction pipe must not be smaller than that of the motor pump connection (do not use reducers). If the suction height exceeds 13.1 feet (4 meters), a larger diameter pipe must be used.

To avoid turbulence, make sure that the submergence of the suction pipe is at least 1.6 feet (0.5 meters).



#### NOTE

Don't forget to mount a foot check valve at the bottom of the suction pipe.

It is recommended to install a check valve after discharging the motor pump to avoid water hammer effects if the motor pump stops unexpectedly.



## NOTE

- Always support the pipe to avoid transmitting stress to the motor pump.
- Be careful not to damage the motor pump and/or the pipe due to excessive tightening of the joints.

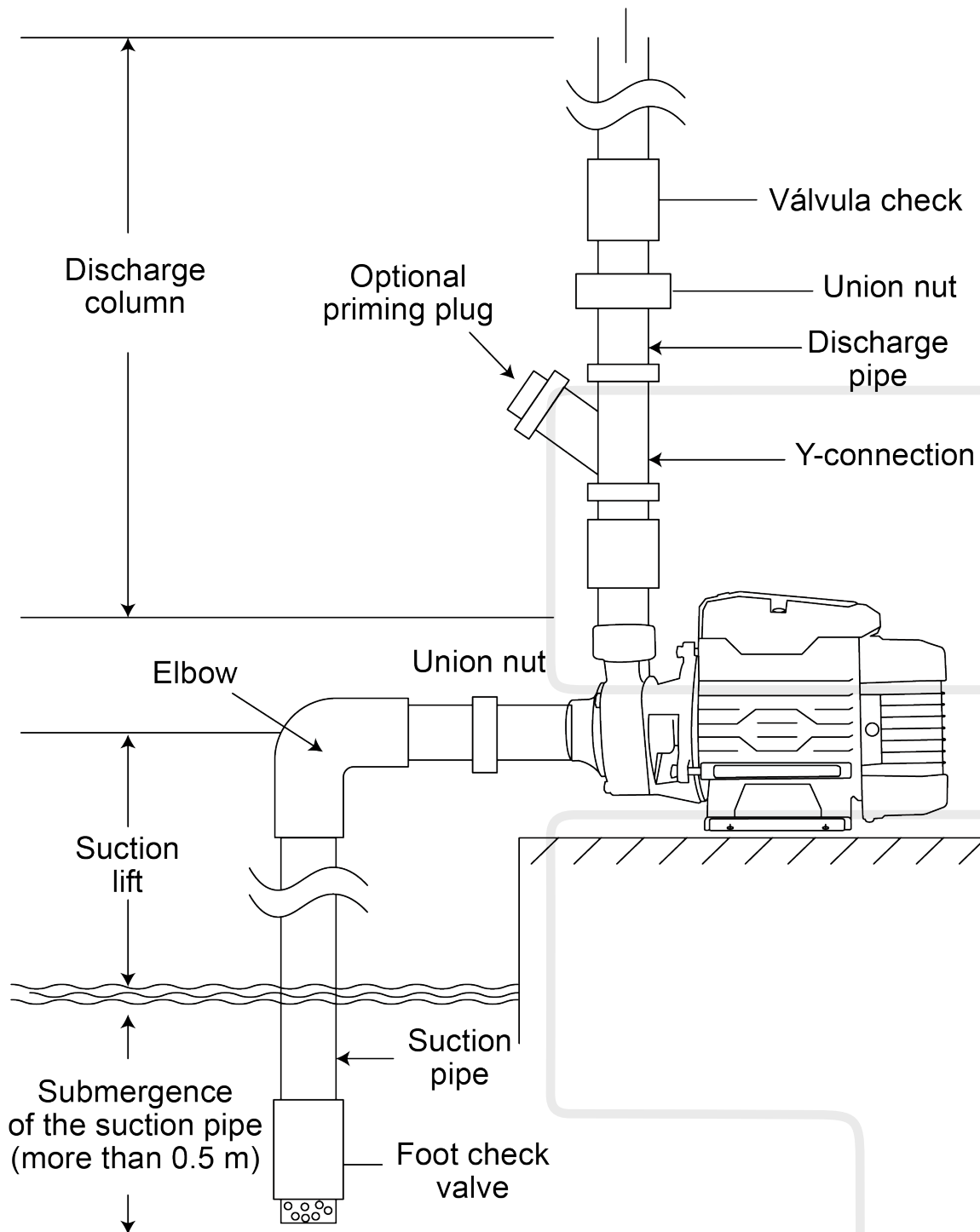
During installation, follow all regulations provided by the competent authority for the site where the motor pump will be installed.



## WARNING

- Always consider the risks of contamination and adhere to the necessary hygiene and sanitary rules.
- Provide the motor pump with a fixed and immovable base to ensure greater safety of the equipment.
- To prevent water flow from returning to the motor pump, we recommend installing a check valve after the motor pump discharge.
- The motor pump must not suck up gravel, dirt, or any other abrasive material that could severely damage the hydraulic parts.

### 5.1.1. INSTALLATION DIAGRAM



## 5.2. ELECTRICAL INSTALLATION



### WARNING

The electrical connection must be performed by qualified electrical personnel.

The main power supply to the motor pump must have a disconnect switch to ensure that the circuit is open when the equipment is serviced or completely replaced.

The power cable to the motor pump and the branch circuit must meet the requirements of the applicable regulations in the relevant location.



### CAUTION

- All wiring, electrical connections, and grounding of the system must comply with the National Electrical Code (NEC) or local codes and ordinances. It is recommended that the motor pump be powered by a circuit that includes a differential switch with an assigned current rating no higher than the rated current of the motor pump.
- Confirm that the values on the motor pump data plate are suitable for connection to the power line.
- Ensure that the motor pump is connected to a proper ground circuit.

## 5.3. START-UP

Once the motor pump is installed (and each time it has been stopped or not used for a long period), it is necessary to prime it by completely filling the motor pump with clean water before starting it. This should be done through the priming plug.

It is essential that the motor pump does not operate without water in its hydraulic body. If this happens by accident, the motor pump must be stopped immediately and primed.



## 6. MAINTENANCE



### WARNING

Before starting maintenance, ensure that the motor pump is disconnected from the power supply and that there is no risk of electric shock.

- Check the condition of the power cables; they should always be in good condition.
- Regularly check the condition of the bearings to avoid noise and prevent subsequent wear on the equipment.
- After a reasonable period, we recommend cleaning the internal components of the motor pump to remove any accumulated scale.
- In case of blockage, a slight twist using a screwdriver on the screw in the center of the fan should be sufficient.
- We recommend having an electrician assist with preventive checks on the installation.
- When there is a risk of low temperatures, drain the water from the pipe to prevent freezing inside the motor pump. Don't forget to prime the motor pump again before starting it.
- If the motor pump remains unused for a long period, it is advisable to empty it completely, rinse it with clean water, and store it in a dry place.

## 7. POSSIBLE FAULTS, CAUSES AND SOLUTIONS

FALLA	CAUSE	SOLUTION
Blocked motor pump	<ul style="list-style-type: none"> <li>Impeller blocked by waste residue, particles, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Use a screwdriver to rotate the arrow through the fan slot.</li> <li>Disassemble the hydraulic body and clean it, along with the impeller.</li> </ul>
The engine does not start	<ul style="list-style-type: none"> <li>Lack of electrical tension (voltage).</li> <li>Inadequate power cable gauge.</li> <li>Switch connected to the motor pump deactivated.</li> </ul>	<ul style="list-style-type: none"> <li>Check that the voltage supply matches the specifications on the data plate.</li> <li>Verify the connections of switches connected to the motor.</li> <li>Change the cable gauge to a larger one.</li> </ul>
The motor works without pumping water	<ul style="list-style-type: none"> <li>The suction height is excessive.</li> <li>There is air in the suction.</li> </ul>	<ul style="list-style-type: none"> <li>Move the motor pump closer to the water discharge level.</li> <li>Ensure that the suction valve is submerged at least 50 cm (20 inches).</li> <li>Prime the motor pump again.</li> <li>Tighten the connections in the suction pipe securely.</li> </ul>
The motor works but pumps little water	<ul style="list-style-type: none"> <li>Inadequate suction height.</li> <li>The impeller is clogged.</li> <li>Inadequate suction and/or discharge pipe diameters</li> </ul>	<ul style="list-style-type: none"> <li>Control the height of the suction.</li> <li>Clean the valve and suction pipe.</li> <li>Disassemble the hydraulic body and clean it, along with the impeller.</li> <li>Tighten the connections in the suction pipe securely and, if necessary, modify the pipe.</li> </ul>
The motor works but produces noise	<ul style="list-style-type: none"> <li>Air intake to the system.</li> <li>Faulty engine bearing.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust the suction connections.</li> <li>Replace the motor bearing (contact your authorized dealer).</li> </ul>
Thermal protection has been activated	<ul style="list-style-type: none"> <li>The engine heats up.</li> <li>The impeller is locked.</li> <li>Inadequate power cable gauge.</li> </ul>	<ul style="list-style-type: none"> <li>Place the motor pump in a ventilated area.</li> <li>Check that the voltage supply matches the specifications on the data plate.</li> <li>With a screwdriver, rotate the arrow through the fan slot.</li> <li>Change the cable gauge to a larger one.</li> </ul>

## 8. USES AND PROHIBITIONS

### USES

"Proper installation in dry and well-ventilated environments."

"Intended exclusively for pumping clean water."

"Use with appropriate pipes and valves to prevent blockages."

### PROHIBITIONS

"Do not use to pump flammable liquids or corrosive chemicals."

"Do not allow suction of gravel, dirt, or solid materials that may damage the equipment."

"Do not install in damp places or areas without proper ventilation."