

# Owners Manual

## UMX - Underwater Thickness Gauge Case

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## INTRODUCTION

Thank you for purchasing the UMX underwater housing for use with your MX-3 ultrasonic thickness gauge. This housing will enable the the user to take the MX-3 underwater to a maximum depth of 300 feet. With proper care, use, and maintenance, the housing will provide years of protection for your equipment. The sections that follow will provide an outline of the general use and maintenance requirements of the UMX housing.

## INSTALLATION

1. Remove the top cover by opening the latches on both sides of the case.
2. Briefly inspect the black rubber O ring gasket, located on the top cover, to be sure it is good condition. Refer to the maintenance section for instructions on lubricating the O ring gasket. **Note:** If the gasket appears to be dry and cracked or damaged in any way, replace the gasket immediately. Do not submerge the case underwater until you have replaced the gasket. Failure to do so may result in permanent damage of your equipment.
3. Load your MX-3 in the case bottom first, making sure that the keypad is facing towards the stainless steel rocker bar used to control the MX-3 from outside of the housing.
4. Attach the top cover to the case making sure the lemo connectors are successfully plugged into the MX-3.
5. Fasten the stainless steel latches to secure the top cover.
6. Connect the transducer to the top of the case and proceed to the MX-3 manual for instructions on thickness gauge operation.

## REMOVAL

1. Remove the top cover by opening the latches on both sides of the case.
2. Slide the gauge out of the case.

## CARE AND MAINTENANCE

The body of the housing is made of acrylic plastic, a material that is well suited for this application, but with certain limitations which must be observed:

1. Keep the housing out of direct sunlight as much as possible. The material is subject to crazing, a surface cracking phenomenon, which does not affect its strength. Crazing is caused by ultraviolet radiation, present in sunlight. The closed clear box is a greenhouse and will heat quickly if left in direct sunlight. Heat is hard on optical and electronic components, so keep the housing covered or shaded as much as possible.
2. Protect the housing from impact. The material will shatter if subjected to sufficient shock. A carrying case is recommended to keep the housing out of direct sunlight and to protect it while the unit is in use.
3. Rinse the outside surfaces with fresh water after use. The plastic and stainless steel fittings are impervious to salt water, but will lose their luster if even small amounts of salt are allowed to accumulate. Use WD-40 on the joints of the stainless steel latches.
4. **WARNING:** Do not exceed the depth limitation of the housing as specified on the following page. Failure to heed this warning may result in leakage and possibly implosion and serious injury.

The housing is sealed by o-rings, which require meticulous care. In order to maintain a watertight seal, the o-rings and their mating surfaces must be clean, free of foreign material, and lubricated with silicone grease.

**The following procedure must be performed on the access door o-ring before each use:**

1. Clean all old silicone grease from o-rings and mating surfaces using paper towels.

2. Inspect o-rings for foreign material (sand, seaweed, hair, etc.), cracks, cuts, soft spots, or deformities. Replace o-ring if damaged. Inspect mating surfaces for scratches, rough spots, dents, or cracks.
3. Apply thin, even coat of silicone grease to o-rings using fingers. Install o-ring on the door, place the door on the housing, and close the latches simultaneously. Inspect for an unbroken dark line on mating surfaces around centerline of the o-ring, indicating that a proper seal has been made.

## **WARRANTY**

1. The manufacturer inspects and tests each housing for watertight integrity before it is delivered.
2. The manufacturer will repair or replace at the manufacturer's option any housing that proves to be defective in construction or materials within one year of date of delivery.
3. The manufacturer is not liable for damage to equipment caused by leakage of water into the housing, nor is the manufacturer liable for loss of data or income therefrom as may result from such leakage. The manufacturer is not liable for any accidents during which this housing was in use.
4. This warranty is void in event of negligent handling of the housing including, but not limited to, dropping the housing, modifications to the housing by other than the manufacturer, improper care of the sealing components, and exceeding the specified depth limitation of 300 feet.
5. There is no express or implied warranty, nor warranty of merchantability, except as stated by the manufacturer above.
6. The buyer understands that, because of the nature of this product, he/she uses the housing at his/her own risk and agrees to hold the manufacturer harmless, except as stated above.

