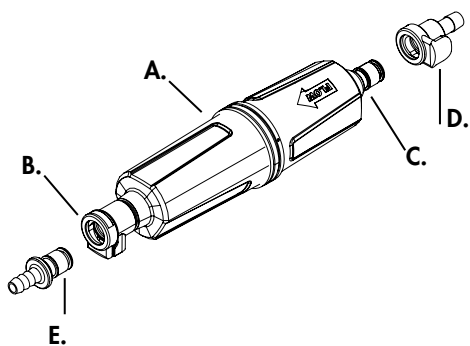


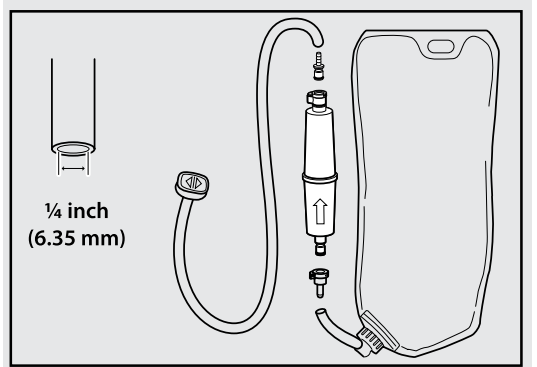
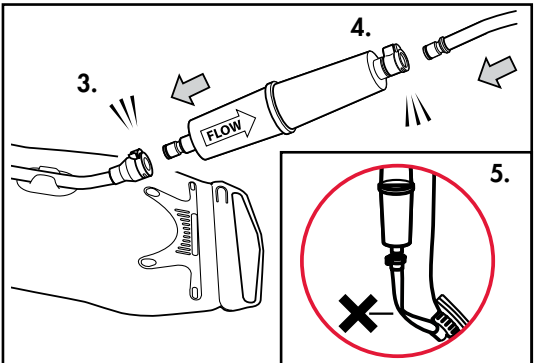
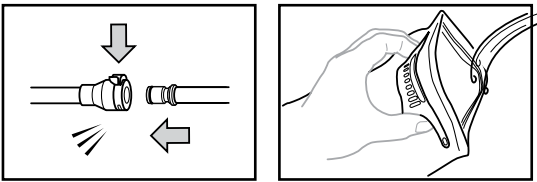
# INSTRUCTION MANUAL



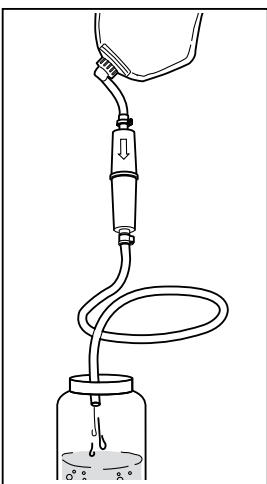
## THRU-LINK™ IN-LINE MICROFILTER



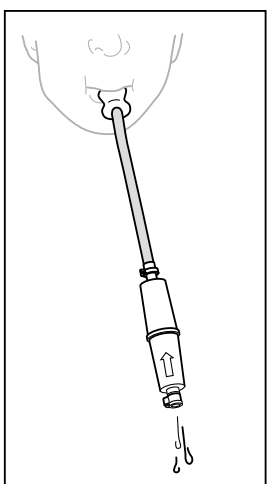
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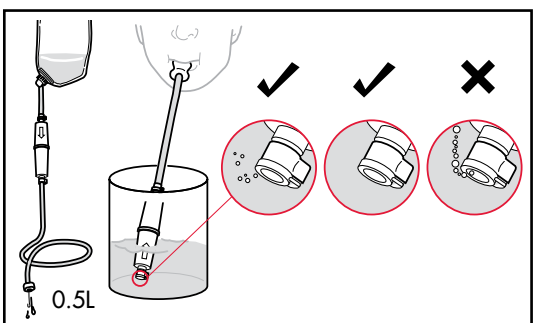
2.



3.



6.



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## IMPORTANT

Read and understand this entire manual carefully before assembling or using this water filter. Keep this manual for future reference. If you do not understand this manual or have any questions, please call Cascade Designs at 1-800-531-9531.

## WARNING

### BIOLOGICAL HAZARD

There are hazards associated with backcountry or international travel and the use of water filters. Drinking untreated water can result in exposure to harmful microorganisms and an increased risk of gastrointestinal illness.

Never use the Thru-Link™ filter to filter seawater or highly chemically contaminated water, such as water from mining tailing ponds or near agricultural operations. The Thru-Link™ filter does not make potable water from these sources and does not remove radioactive materials, or particles smaller than 0.2 microns.

Improper use of this filter increases your risk of exposure to harmful microorganisms and increases your risk of gastrointestinal illness. Reduce your chances of becoming sick by following the warnings and instructions in this manual and educating yourself on backcountry and international water safety. YOU ARE RESPONSIBLE FOR YOUR OWN SAFETY AND THE SAFETY OF THOSE IN YOUR GROUP. PLEASE USE GOOD JUDGMENT.

Keep potentially contaminated parts away from filtered water to prevent cross contamination. READ, UNDERSTAND, AND FOLLOW ALL instructions and warnings in this manual before using this filter. Failure to follow warnings and instructions may result in gastrointestinal illness.

### THRU-LINK™ IN-LINE MICROFILTER INSTRUCTIONS

The Thru-Link™ Microfilter uses hollow fiber technology to remove bacteria, protozoa and particulate, and employs activated carbon to reduce chemicals, tastes and odors, from fresh water sources. This filter does not remove viruses.

#### MICROFILTER PARTS:

- A. Thru-Link Filter
- B. Female Quick Connect
- C. Male Quick Connect
- D. Barbed Female Quick Connect Fitting
- E. Barbed Male Quick Connect Fitting

### IMPORTANT NOTES

**WARNING** Once your reservoir and drink tube have been used for contaminated water, they must be disinfected before they can be used to carry clean water again (See Disinfecting the Filter). Failure to disinfect can lead to gastrointestinal illness.

- To extend life of filter:
  - \*Backflush regularly to help prevent silt build-up; ideally every 8 liters/1x per day of use. (See Cleaning the Filter.) If this fails to restore water flow, replace filter.
  - \*Use the clearest water available. If clear water is not available, let particles settle before filtering.
  - \*Avoid filtering silty, cloudy, muddy, glacial stream, or tea-colored water because these sources will quickly clog the filter.
- On extended trips, bring a spare filter.
- To treat water with suspected viruses, use an approved disinfectant such as Aquatabs®. For more information, see the Centers for Disease Control Web site: www.CDC.gov.

## 1. INSTALLATION & FILTERING

### BEFORE FIRST USE:

You'll need to flush the filter of loose carbon dust, which is harmless. Follow the instructions for filter installation. Then, fill reservoir with water, hold bite valve below reservoir and pinch to flush until water is clear.

#### For reservoirs without Quick Connect fittings, see INSTALLATION FOR RESERVOIRS WITHOUT QUICK CONNECT FITTINGS.

1. Detach drink tube from reservoir.
2. Fill reservoir with water.
3. Plug filter into reservoir.
4. Plug drink tube into filter. Ensure arrow on filter points toward bite valve.
5. Place system into pack. Ensure hose does not kink when wearing pack.
6. Open bite valve and drink.

**WARNING** Disinfect the hydration reservoir and drink tube before using them again to carry clean water. (See Disinfecting the Filter) Failure to disinfect can lead to gastrointestinal illness.

**WARNING** DO NOT drop, or allow the filter to freeze once it's been used. A damaged filter cannot prevent exposure to harmful microorganisms. If you suspect the filter may be damaged, perform a safety check (See Safety Integrity Check). If the filter is damaged, discontinue use and replace it.

#### INSTALLATION FOR RESERVOIRS WITHOUT QUICK CONNECT FITTINGS:

**STOP!** Before cutting drink tube for filter installation, verify tube's inner diameter is 1/4 inch (6.35 mm). Barbed Quick Connect Fittings are designed only for 1/4 inch tubing.

- Choose desired location along the drink tube to install the filter—ensure the tube won't kink when wearing pack.
- With a pen, mark the lowest point of filter closest to the reservoir on drink tube, and cut there.
- Attach Barbed Quick Connect Fittings to filter.
- Position filter with arrow pointing toward bite valve. Plug barbed fittings into drink tubes to install filter. Note: Rubbing alcohol may be used to help insert fittings.

## 2. FILTERING THROUGH GRAVITY FEED

1. Fill reservoir.
2. Hang reservoir.
3. Remove bite valve and let water fill container.
4. Close shut off valve or pinch hose to stop flow and reinstall bite valve.

## 3. CLEANING FILTER (BACKFLUSH)

Frequent backflushing helps prevent silt build-up, extending the life of the filter. MSR recommends every 8 liters (1x/day of use).

1. With filter installed, suck on bite valve to pull water through filter, filling drink tube with filtered water.
2. Detach filter from reservoir.
3. Blow into bite valve, pushing all water back through filter.
4. Reattach filter to reservoir.

## 4. DISINFECTING FILTER & HYDRATION SYSTEM

To eliminate the growth of bacteria or mold, which can reduce flow rate, always disinfect the filter before or after long-term storage, or after long-term use (15+ consecutive days).

1. Detach filter from hydration system.
2. Connect drink tube to reservoir, and wash system with warm, soapy water, flushing through drink tube.
3. Rinse system with clean water to clear soap.
4. Reattach filter into system. Fill reservoir with 2 liters of clean water and add 2.5 mL (≈ 1/2 tsp) of household bleach free of dyes or perfumes. Or, fill reservoir with 1 liter of clean water and dissolve 6 Aquatabs® purification tablets.
5. Shake reservoir vigorously.
6. Hold bite valve below reservoir, and flush half of the bleach solution through filter into sink.
7. Let bleach sit in filter for 30 minutes.
8. Empty remaining solution through the filter.
9. Filter 1 liter of clean water through system.

## 5. STORING THE FILTER

Before or after long-term storage, or after long-term use (15+ consecutive days), disinfect filter (See Disinfecting Filter).

**WARNING** After it has been used, never store the filter in cold temperatures (below 32 F/ 0 C) because freezing the filter can permanently damage the internal fibers.

## 6. SAFETY INTEGRITY CHECK

The filter media can be damaged if dropped, or if frozen after use. If either of these has happened, perform an integrity check. YOU WILL NEED A POT TO PERFORM CHECK.

1. Pass 1/2 liter of water through filter.
2. Lift reservoir above filter to purge any air bubbles.
3. Ensure drink tube on the clean side is filled with water.
4. Detach filter's Male Quick Connect from reservoir.
5. Submerge Male Quick Connect in pot of water.
6. Blow through bite valve, pushing all water back through filter.
7. Allow initial bubbles to clear filter.
8. Blow into bite valve again. If it's impossible to blow air through filter, filter is safe. **If it's possible to blow air through the filter and a steady stream of micro bubbles appears, filter is NOT SAFE. If filter is damaged, discontinue use and replace.**

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