1/4” & 3/8” Push Lock Mist Line System

GENERAL SPECIFICATIONS

Water supply
Standard 3/4” MHT garden hose fitting at 20 to 100 PSI. (1.3 bar - 6.8 bar)

Pump Location
High pressure pumps are not silent! When possible the pump should be placed away from the area to be misted. The pump needs a water and electrical hook up and can be placed up to 250 ft away from the mist line without significant pressure loss. Choose a spot that is relatively easy to access so as to make it easy to change the filter and access to all controls. If possible, place pump out of direct sunlight.

SET-UP

1. Remove the Pump Module from the shipping container and place in an upright position.

2. Check the packing list or invoice with the shipped number and models of items.

3. Attach top of filter housing to pump. Remove bowl of filter housing. Locate stainless steel on pump case. Carefully screw the top of the filter housing on to the pump making sure the threads are properly aligned.

4. Place filter element into bowl of filter housing and inspect the o’ring at base of the threaded section of bowl for proper seating. Screw bowl and filter element onto the top of the filter housing.

5. Connect water supply to normal 3/4” garden hose inlet fitting located on the filter housing. Secure the hose and fitting tightly to prevent leaking. If it leaks make sure washer is installed at hose fitting.

6. Only Pump Model CB405, CB410, CB420
Remove the pump cover revealing the pump and motor by unscrewing the screws attaching it to the Base. Locate and remove the shipping sticker on the red breater cap before running the pump.

7. Plug power cord to electric supply (electrical outlet or extension cord). Make sure the cord and circuit are rated to the needs of the pump module. Electrical power must be supplied from a properly grounded mating receptacle.

Note: International shipped pump modules come without electrical plug. These need to make fit with a solid country specific plug.
## INSTALLATION OF MISTING LINE

### IMPORTANT TIPS

- Be sure to measure carefully before cutting tubing *( Measure twice and cut once)*
- The Optimum height of the mist line depends on the specific conditions. Though generally speaking 8’ to 10’ is the best height.
- **Do not install nozzles until system is a fully installed.**

### Installing Misting Line and Flexible Feed Line

1. Attach Pump Adapter (1/4" Push Lock x 1/4" FPT) to the 1/4" fitting of the pump module. These fittings do not need plumbers tape. Do not over tighten.

2. Using the stainless steel and rubber mist line hangers start with the first piece of tubing and attach it to the structure. To assemble push lock parts rotate fitting or tube half way while pushing in the fitting and push the tube all the way (3/4") unless you feel snug and it will not go further.

   - To easy connect, mark tube at 3/4” from the end before inserting into a Fitting.
   - Place hangers every 2 to 3 feet

3. Use misting tees/tubing/elbows/tees until you reach the end of the final piece of mist line and then install the end cap. Point the nozzle tees in the desired direction. (Generally, a 45° angle towards the ground works best).

   Do not forget the push lock part at the misting line where you want to connect the pump with the misting line. (This is where the high-pressure hose will be attached).

4. Once all of the misting line is in place; attach the high pressure nylon tubing to the pump and misting line.

### Flushing the System

5. Turn water on and then turn the pump on. Very little pressure will be developed until most the nozzles are installed. Water will begin to run out of the first few nozzle standoffs.

6. Begin installing nozzles with the closest to the pump first and work towards the end of the system. You will need to turn the pump and water off as you reach the last few nozzle standoffs, as the pressure will start to build.

## CUSTOMIZING YOUR SYSTEM

### Cutting the Tubing

The Stainless Steel, Copper or Nylon Tubing can be cut with a normal tube cutter available at any hardware store. Hold mist line at nearest stand off with a pair of pliers and rotate the tube cutter around the tube tightening the tube cutter 1/4 turn each rotation until the tube is severed. Removing the Burrs. Push the reamer blade into the tubing and turn the tubing clockwise with even strokes.

**Note for Stainless Steel Tubing**

With cutting of the SS tubing you did remove the groove on the end of tubing. This groove is important to hold the SS tubing in the Push Lock Fitting. Put a new groove - 3/8” from the cut end - with a tubing cutter. You need to fiddle with it to make it work. If you need to make one or two cuts it’s OK, but for multiple parts it must be done in our factory.

### Bending Tubing

The Stainless Steel and Copper Tubing can be bent using a hand held tube bender available from Cloudburst. Slight bends can be done by hand though be very careful not to kink the Stainless Steel or Copper Tubing.

**Note for Remove Tube from Push Lock Fitting**

Hold back Collect (Inner Sleeve) of the Fitting with a Tube Gripper and pull out the Tube.

## OPERATION

1. Turn water supply to pump on. (The pump modules includes a pressure switch that will prevent it from operating without a water supply.)

2. **Adjusting the pressure.**

   Every pump is equipped with a pressure regulator. To adjust the pressure remove the pump cover and locate the pressure regulator.

   On the CB405, CB410 and CB420 pumps, locate the brass part (1) and rotate counterclockwise for lower pressure and clockwise for higher pressure. Optimum system pressure 800 to 1200.
OPERATION

On the CB 400 pump the pressure regulator is the hexagonal brass projection from the pump (2).

To adjust the pressure use 2 adjustable wrenches.

Use a wrench closest to the pump to keep the bottom of the pressure regulator from moving. Use a wrench on the top to move the top 3/8” of the brass part. Rotate counter-clockwise for lower pressure and clockwise for higher pressure. Operating pressure for the CloudblastTM is 600 to 1000 PSI.

3. Never run any pump with the water supply turned off.

4. Turn on switch.

SERVICE AND MAINTENANCE

Filter
The water filter should be replaced every 6 months or every 500 hours of use, whichever occurs first.

Nozzles
Cleaning nozzles Replace or clear obstructed or clogged nozzles. Most nozzles clog because hard water deposits accumulate in the nozzle (like the white residue left on a shower door). The best way to clean nozzles is to use a retail product like CLR -Calcium / Lime and Rust Remover which can be purchased at any grocery store.

Step 1: Scrap a knife across the small hole in the nozzle (don’t poke into the hole)

Step 2: Mix 1/2 warm water 1/2 CLR in a small jar - place the clogged nozzle in the jar and shake vigorously for 20 seconds, let set for a few seconds and shake another 20 seconds.

Step 3: Remove nozzles from jar and hold the nozzle by the threads and tap it on a hard surface (like a countertop)

Step 4: Rinse with fresh water and most nozzles will be unclogged

If you have a jewelry cleaner (ultrasonic bath) use that instead of the jar.

Storage
Do not store machine in an area that is susceptible to freezing. Freezing may cause damage to internal components of pump.

Only Pump Model CB405, CB410, CB420
The oil in the pump head should be replaced every 2000 hours of use. Use either 30 weight non-detergent automotive oil or 30 weight pump oil. Locate the drain plug on the bottom of the pump. Remove both the breather-cap on the top of the pump and the drain plug to allow the old oil to drain. Catch the oil and dispose of properly.

On the side of the pump there is a clear window to view oil level. Add oil until it reaches the dot in the middle of the window.

Periodically, check the oil level and oil if needed.

End of Season Maintenance

1. Un-plug Pump Module

2. Remove all Nozzles and Store in dry pace

3. Storage - Do not store machine in an area that is susceptible to freezing. Freezing will cause damage to internal components of pump.

4. Remove filter and discard.

SAFETY

Cloudburst cannot anticipate every possible circumstance that might involve a potential hazard. The warnings, cautions and safety suggestions that follow are therefore not all inclusive. If any operating procedure, installation, Maintenance or work method not specifically recommended is used, you must satisfy yourself that the product will not be damaged or made unsafe by its use.

- Always connect the machine to the correct electrical supply pullet. Comply with all local and national codes and ordinances regarding electrical requirements.
- Do not allow electrical cord connections to fall or lay in water.
- Use only extension cords rated for use with this machine.
- Always disconnect the electrical cord prior to performing any repairs or service. Do not attempt repairs or modifications you do not understand. Contact Cloudburst or your dealer for questions or service.
- Use only potable water. (Clean and safe for drinking.)
# Troubleshooting

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## Warranty

CLOUDBURST warranties its products to be free of defects in material and workmanship for a period of:

Two Years Guarantee on parts and labor.

Lifetime Guarantee on all Stainless Steel Mist Lines, Fittings & High Pressure Hoses.

No merchantability or other warranty, expressed or implied is made within the warranty period. CLOUDBURST is not liable for damages or any expenses incurred through the use of its products. The warranty will be considered violated if the products are used for other than the criteria described in each product’s guidelines for use.

Nozzles and Filters are excluded from this warranty.