

# 1 KOOLANCE RP-452X2 Installation Guide v 1.0

The Koolance RP-452X2 is designed for one or two PMP-450 or PMP-450S pumps (not included). It mounts into two consecutive 5.25" computer drive bays using the included screws.

## Pump Disassembly

The pumps must be disassembled for installation. Unscrew the large ribbed collar on each pump by hand.



Original pump o-ring (not used)



Remove the original pump o-ring and ribbed outer collar. These are not used with the RP-452X2.

## Pump Installation

Unscrew the metal sleeve from the side you wish to install the first pump.

Beneath the metal sleeve is a black rubber o-ring. Keep this for later use.



The pump is now ready to be installed into the RP-452X2.

GENTLY screw the pump into the RP-452X2 by tightening its metal sleeve.

Be extremely careful when threading the sleeve into the RP-452X2. If the threads are not even, the product could be damaged by cross-threading.

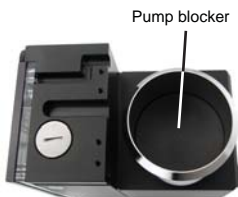


**CAUTION:** Installing the metal pump sleeves into the RP-452X2 improperly can result in thread damage which is not covered under the product warranty. Be sure the threaded components stay correctly aligned while tightening and always tighten gently by hand.

To mount the second pump, repeat the above process for the opposite side of the RP-452X2.



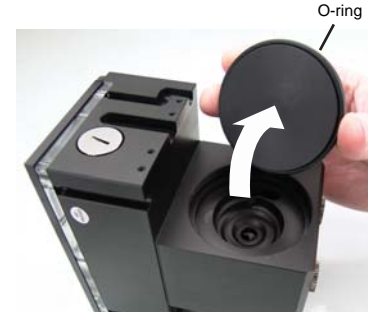
## Operation with One Pump



The RP-452X2 is shipped with one pump side "blocked". Leave this in place with its o-ring and metal sleeve if you are only installing one pump.



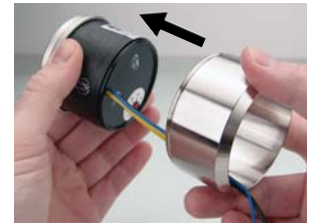
If you need to remove the pump blocker, lift up one edge of this circular piece. This is only necessary when installing two pumps.



The o-ring for this side's pump is found below the pump blocker. This o-ring will be used if a pump is installed here.



Place the Koolance black o-ring (removed from the RP-452X2 or pump blocker) around the rim of the pump motor. Do NOT use the original pump's o-ring.



Slide the metal sleeve around the rear of the pump. The pump's wiring should go INSIDE this metal ring.



In addition, the inlet and outlet of this pump must stay plugged on the rear nozzle ports to prevent leaking.



**CAUTION:** To prevent leaking while using one pump, make sure the pump blocker remains installed with its o-ring and metal sleeve. The rear inlet and outlet ports for this absent pump must also remain plugged.

## Using Serial or Parallel Loops

The dual front reservoirs can be left separate (parallel) or combined to form one reservoir. This is done by replacing the large side plug. Use the long version for separate tanks, and the short version to combine them.



Long Side Plug (Separate Tanks)

NOTE: For serial pump operation, the rear outlet from one pump should be directly connected to the inlet of the other using hose or available fittings.



Short Side Plug (Combined Tanks)

## LED Lighting (Optional)



There are four locations behind the acrylic for 3mm wide LED lights (sold separately): 2 on the bottom and 1 on either side.

Slide each LED into the small receptacles in the edge of the acrylic. A small drop of hot glue can help hold each LED in place.