

ModMyMods Raspberry Pi Mini Water Cooling Kit Setup Instructions



Parts List

1x Alphacool Single 60mm Radiator (1011594)

1x MCX Plugs – 10 pack (18036)

1x MCX Nickel Block (20014)

2x MCX 5x Way Dividers Block (20001)

1x DC-LT Pump (49125)

1x DC-LT Pump Top (52197)

1x DC-LT Reservoir (52200)

6x 11/8mm Compression Fittings (62174)

3x Phobya G1/4 Plug (68080)

1x 15mm x 15mm Adhesive Thermal Pad (31085)

2 feet 11/8mm Clear PVC Tubing (58000)

2 feet 5/3mm PVC Tubing (55000)

2x Noiseblocker NB-Blacksilent Fan - XR1 (77222)

1x 250ml Alphacool CKC Fluid

1x Phobya 3x 3-Pin to 3- Pin Power Distribution Cable (81125)

Step 1 - Assemble Pump and Pump Top

Inspect the DC-LT Pump (49125) make sure the red gasket is seated properly. Then take the DC-LT Pump Top (52197) and place the pump impeller side down in bored hole in the pump top. Align the two mounting tabs on the pump with the two holes in the pump top. Use the screws included with the pump top to secure the two pieces together (ONLY hand tighten just enough to ensure a secure seal).

Step 2 - Secure reservoir to Pump Top

Now take the DC-LT Reservoir (52200) and seat the gasket in the lip in the bottom of the reservoir. Then attach the reservoir to the pump top with the four included screws using a cross pattern and being careful again not to over tighten. Use a Phobya G1/4 Plug (68080) to plug the port in the side of the reservoir.

Step 3 - Attach the Fans to the Radiator

This kit is intended to be used with the radiator fans in a push/pull configuration. Attach the fans radiator with the included screws. One fan should have the blue fan blades showing and the other should have the Noiseblocker logo showing.

Step 4 - Set up the MCX 5x Way Divider blocks

The two MCX 5x Way Divider Blocks (20001) allow the kit to be used with up to five embedded devices. Additional MCX Nickel Blocks (20014) are available for purchase. For a single embedded device use the MCX Plugs - 10 pack (18036) to cap off the unused barbs on the divider blocks. Essentially one divider block will allow fluid to travel to the MCX Nickel Block mounted on your embed device and the other will allow fluid to return to the loop. Finally take each divider block and cap off one end with the 2 other Phobya G1/4 Plugs (68080).

Step 5 - Install the MCX Nickel Block

Take the 15mm x 15mm Adhesive Thermal Pad (31085) and the MCX Nickel Block (20014) and after peeling off the backing from both sides adhere the block to your devices processor. Press firmly to ensure good adhesion but use care as to not break anything.

Step 6 - Plumb up the loop

Part 6A

The only portion of the loop where the 5/3mm PVC Tubing (55000) will be used is between the divider blocks and the MCX nickel block. Cut that tubing into 2 appropriate length pieces and attach one end to a divider block then the other to the MCX nickel block. Repeat for the other divider block. The barbed connections here are enough to hold on the tubing on their own.

Part 6B

The 11/8mm Compression Fittings (62174) are next. Remove all the collars from the fittings and set them aside. Thread the G1/4" end of the fittings into the inlet and outlet of both the Alphacool Single 60mm Radiator (1011594) and the DC-LT Pump Top (52197). The 2 remaining fittings will go in the unplugged ends of the 2x MCX 5x Way Divider Blocks (20001). Fittings should be hand tightened to avoid stripping any threads or cracking the blocks.

Part 6C

At this point you are ready to use the 11/8mm Clear PVC Tubing (58000) to complete the connections between the pump top, radiator and divider blocks. Be sure to slide 2 compression fitting collars you set aside earlier over each length of tube. Seat the tubing over the fittings and then hand tighten the collars down to secure it.

Part 6D

You should now have a loop that goes from the pump/res combo, to the radiator, then to a divider block, from there to the MCX nickel block, back to the second divider block, and then finally returning to the pump/res combo.



Step 7 - Fill the Loop

Connect the Phobya 3x 3-Pin to 3- Pin Power Distribution Cable (81125) to the two fans and the pump. Now that all of the connections have been made double check everything to make sure it is secure. Unscrew top cap of the reservoir and fill with the Alphacool CKC Fluid. Connect the 3-pin splitter cable to a power source and cycle the pump until the fluid is has neared the bottom of the reservoir. Do NOT let the pump run dry. Repeat the fill/power cycle process until the loop is full. It is best to leak test the system before powering up your embedded device to reduce risk of damage.