MCR80-F2™ RADIATOR

MCR80 radiator	1	80mm fan guard	1
#6 X 1 1/4" Philips screw type B	4	80x80x25mm fan	1
#6 x 3/8" Philips screw type B	4	Quick-connect fittings	2
Tube inserts	2		

Back panel
Fan exhaust opening

Fan guard MUST USE*

80x 25mm fan

Self Tapping screws

MCR80 Radiator
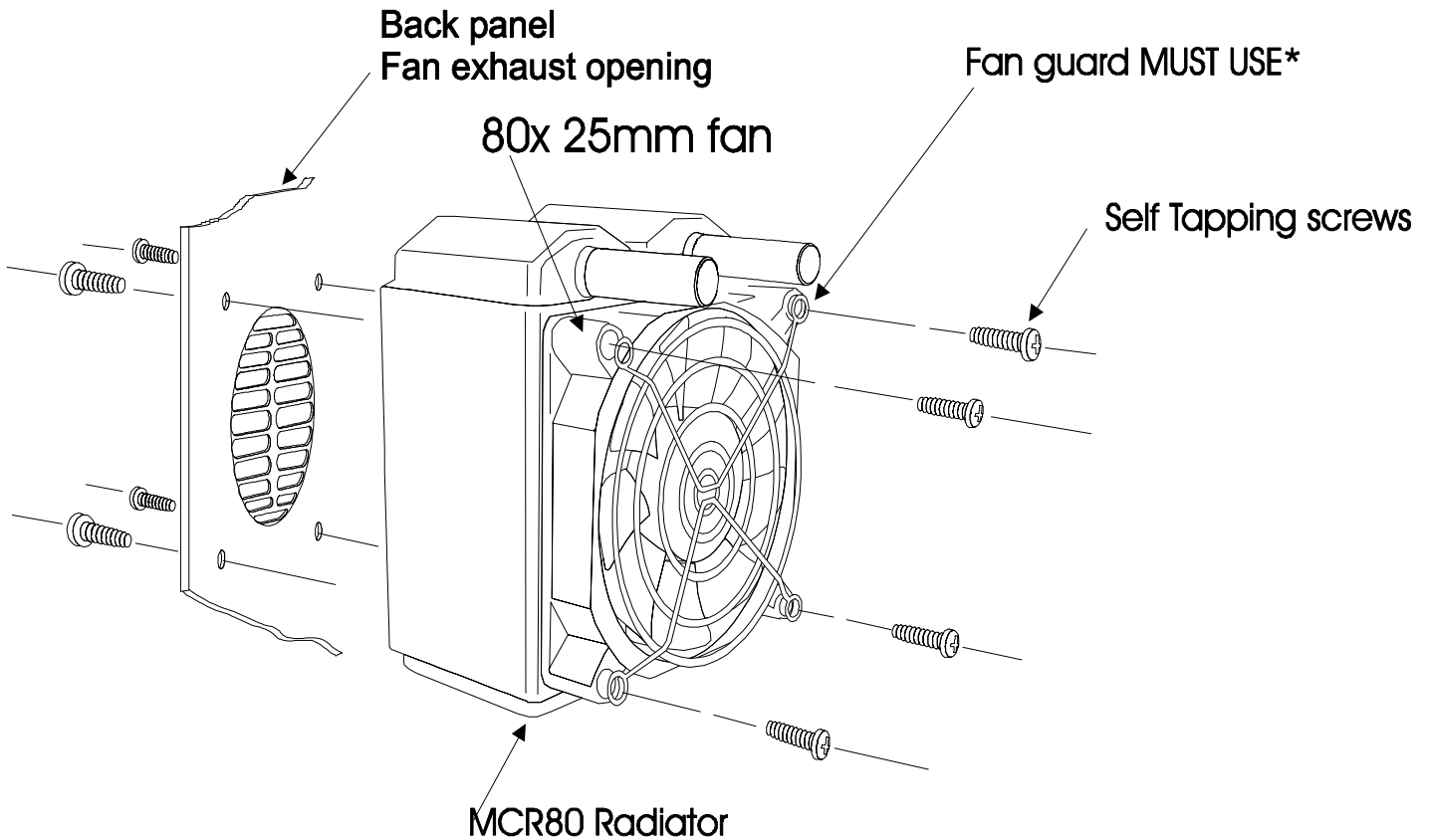
*Note of caution regarding the inlet/outlet side of the radiator:

The fan guard MUST BE INSTALLED when using the provided self-tapping screws. It is necessary to allow sufficient clearance between the tip of the screws and the radiator core. **Failure to use the fan guard will systematically result in permanent damage to the radiator,** as the screws will otherwise punch a hole in the core channels. Users are advised that such damage is not covered under our warranty.

Likewise, if fans other than the provide 80x80x25mm fans are installed, users should carefully check the clearance remaining between the retention screws and the radiator core.

As shipped, the MCR80-F2 has the fan pre-installed in a conventional manner (exhaust). It is nonetheless possible to configure the fan for intake. In effect, we have found that blowing fresh air coming from outside of the chassis through the radiator lowers CPU temperatures. If you prefer such configuration, simply remove the fan from the radiator, attach it to the chassis first, (fan label facing the inside of the chassis), then re-attach the radiator to the fan. The fan guard will no longer be necessary in this particular configuration, unless you were to punch out the chassis fan opening (louvers) to improve airflow, in which case the fan guard would add a nice finishing touch to your fan opening.

Quick-connect fittings installation and use:

Your radiator ships with two quick-connect union fittings (3/8" tube OD to ½" tube OD). The 3/8" side of the fitting goes on the MCR80 radiator inlet and outlet tubes. The ½" side of the fitting is used to connect hoses from your circuit. Notice that the body of the fitting has been flattened on the 3/8" side. This flat section provides clearance for the fan, and should be oriented towards it. The fittings also feature color-coded collets. While these are purely conventions, you would typically install the red collet (warm water) on the inlet side of the radiator, and the blue collet (cool water) on the discharge side.

Using quick-connect fittings:

If you are using soft vinyl tubing, you must also use the provided tube inserts:

TIP! Rubbing the extremity of the tube with a little bit of liquid soap will greatly facilitate insertion of the tube into the quick-connect fitting.

Tube insertion

Insert the tube into the quick-connect fitting. The tube will go in freely for the first ¼" and you will then feel a resistance: this is the O-ring inside the fitting. Push *through* the O-ring by twisting the tube back-and-forth for another ½" until the tube reaches the tube-stop at the bottom of the fitting. The tube is properly installed once the visible extremity of the tube insert is flush with the face of the quick-connect fitting.

Tube removal:

The collets of our radiator quick-connect fittings feature two little "ears", which ease the removal process: firmly hold the tube in the cradle formed by three fingers, and push against the ears with thumb and index fingers. This will disengage the tube from the fitting. Correct position of the hand and fingers is shown in the picture to the right:

2.   Radiator specifications:

❑ Height: 4.1" (104.8mm); Width: 3.25" (82.5mm); Depth: 3.2" (81.6mm)

❑ 2-pass 80 mm radiator specifically developed for PC CPU and VGA liquid cooling

❑ Double-row high internal volume design 80 mm (3 inch) Copper core consisting of flat tubes for maximum heat conductivity

❑ High-density copper fin configuration for enhanced heat dissipation Tested in our labs and rated for 100 Watts with a 15°C coolant temperature rise. 3/8" OD inlet and outlet for use with 3/8" ID tubing.

3.   Fans specifications:

Part #	Voltage (V)	Current (mA)	Revolution (RPM)	Volume (CFM)	Max Static pressure (InH20)	Sound Noise (dBA)
AFB0812M	12	180	2700	31.4	.129	28