

TECHNICAL MEMO

RINI’s Personal Cooling System (PCS) 2022 Operation Recommendations
October 19, 2021

- The 2022 car configuration is anticipated to have higher cabin temperatures for the driver.
- RINI advises the following actions to maximize cooling performance of the PCS:

Recommendation #1 – Air Ducting and Mounting Location

1. Mount the Personal Cooling Unit in a “cooler” location that avoids direct contact with high temperature surfaces such as the floor or near exhaust. If this is unavoidable then thermally insulate from hot surface using rubber stand-offs between mounting tray and surface.
2. Ensure that clean outside air is properly ducted to the Unit Inlet on the back-end of the unit as shown in Figure 1.

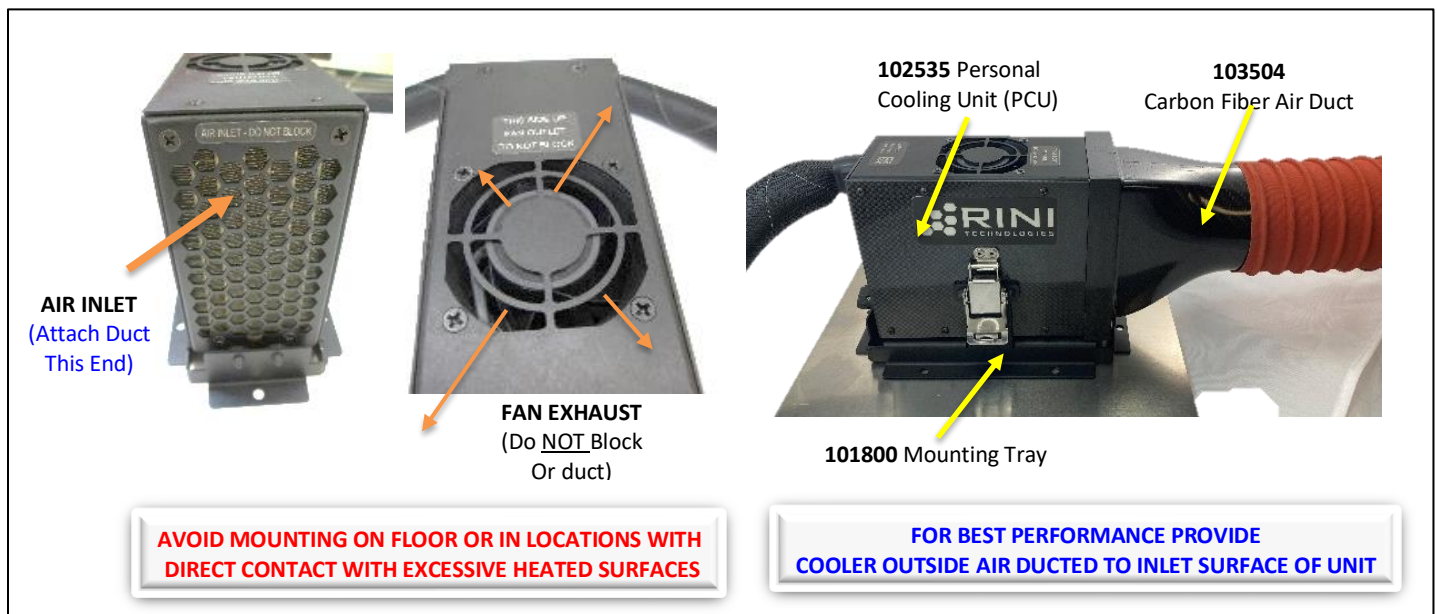


Figure 1: Air Ducting Recommendations – RINI PCS

Recommendation #2 – Pre-Cooling the PCS prior to Race

- The PCS and Cooling Shirt or Vest should be primed with water prior to every race as shown in the operating instructions.
- The PCS is recommended to be run pre-race to chill all components or primed with chilled water prior to the race. This reduces the cool down time for the unit and driver significantly.
- Once the system is operational it should remain “ON” throughout the race to ensure the liquid in the garment remains chilled throughout the race.

Recommendation #3 – Switch and Power Control

- RINI recommends a Main Power Switch to control power ON/OFF to the unit if desired at any time. A Dash Switch is also helpful if the driver is unable to reach the switch control on the front of the unit.

CAUTION: If the PCU is not operated or is turned off during the race, the entire system including the water loop will heat soak to the cabin temperature and will take 5-7 minutes to cool down from the hot cabin temp to the chilled water temp.