

Flow Reversal Option for SolarAttic Systems

The Flow Reversal option is a unique enhancement designed for SolarAttic's attic-based pool heating systems. By reversing the direction of water flow through the system, homeowners can significantly improve pool heating efficiency, reduce energy use, and even gain added cooling benefits for their homes. Below is an overview of how this option works, its benefits, and important considerations before installation.

What is Flow Reversal?

Flow Reversal allows pool water to move in the opposite direction within the SolarAttic system by turning a special valve 90 degrees. This valve can be operated manually or with a motorized actuator. Instead of always returning heated water to the surface of the pool, Flow Reversal directs warm water to the pool's bottom. This process pushes colder water upward into the circulation system, increasing heating efficiency and distributing warmth more evenly.

How Does it Work?

The system relies on a four-port valve that can easily switch the water's direction with a quick turn. When paired with an automatic solar controller, Flow Reversal can adjust automatically whenever attic heat is available or when pool temperatures need to be maintained within a set range.

Key Benefits of Flow Reversal

1. ****Better Heat Distribution**** – Warmer water is directed to the pool bottom, ensuring cold water is efficiently cycled through the heating unit.
2. ****Greater Efficiency**** – Tests and case studies show heating efficiency can improve by two to three times, cutting heating time by up to half and lowering energy use significantly.
3. ****Added Cooling for the Home**** – Because SolarAttic units use attic heat, homes can experience reduced air conditioning demand, sometimes lowering cooling costs by 25–30% while extending the swimming season.

Important Considerations

Flow Reversal works best with pool plumbing systems that have separate lines for the skimmer and the main drain. If your system combines both into one pipe, modifications may be needed to enable this option. It is also essential to ensure compliance with pool safety standards, as certain configurations may not align with ANSI/APSP-7 entrapment protection requirements. Always consult with a qualified installer before adding this option.

Summary of Flow Reversal Features

Feature	Description
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Operation	Reverses water flow with a 90° valve turn (manual or motorized).
Purpose	Directs warm water to the bottom of the pool, pushing colder water into circulation.
Efficiency	Can double or triple heating performance, reducing heating time and energy use.
Automation	Compatible with solar controllers for fully automated operation.
Requirements	Works best with separate plumbing lines for skimmer and main drain.
Cautions	Must follow pool safety codes and ANSI/APSP-7 standards.