



## Code E90 for PureSpa whirlpool

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Code E90 is displayed when the water flow is insufficient. Insufficient water flow usually relates to water quality and the filter pump.

Below are some specific reasons for the E90 error code:

### 1. The filter is mounted on a wrong opening

The filter must be screwed onto the **bottom (intake) opening**.

For COMBO whirlpools, this is the opening marked with 'B'  
(COMBO whirlpools have both – bubbles and water massage jets).



For BUBBLE SPA and SIMPLE SPA whirlpools, the filter must be screwed onto the opening marked with 'C' (BUBBLE SPA and SIMPLE SPA whirlpools have bubbles only, no massage jets)



If the filter is mounted elsewhere, the water will not pass through the filter cartridge, which is supposed to catch mechanical impurities (hair, etc.), and will clog the pump outlet instead. Impurities that enter the filter system like this may damage it – pump jamming, scraping the pump duct, breaking the axle, etc. These types of damage are not covered by the warranty.

## 2. Water quality

Even the drinking water from the public water supply may not have the correct parameters for whirlpools or swimming pools. It is best to test the water with indicator papers (pH, hardness, calcium and chlorine content) immediately after filling the whirlpool for the first time in order to establish baseline parameters. Then perform a follow-up test after running the filtration to verify that the selected filtration time is adequate. Usually, running the filtration for 2 hours a day is enough, but it depends heavily on environmental factors: frequency of use, number of users, air temperature, etc. The filtration time should be adjusted based on these factors. The purpose of filtration is to remove mechanical impurities from water.

If you have a whirlpool with a saltwater system, add the correct amount of salt in the whirlpool water (see user manual) and leave the saltwater system (sanitizer) running for 2 hours a day. It is not necessary to turn on the filter pump as it will automatically turn on with the saltwater system (sanitation). The saltwater system only regulates the amount of chlorine in the water (for water disinfection); the other parameters (pH, hardness, calcium content) have to be adjusted with pool chemicals as necessary.

If the water is too hard or contains a lot of calcium, such excessive calcium can clog the filter or even the pump and other parts of the motor base in a matter of hours. It is therefore important to test the water and adjust the parameters with pool chemicals as necessary.

If you have a whirlpool with a saltwater system and add salt to the water, only use sodium chloride (NaCl) with at least 99.8% purity. You may also use salt pellets (compressed forms of evaporated salt) for water treatment. These, however, take longer to dissolve.

The purer the salt, the more chlorine the saltwater system will produce. Do not use sea, iodised, table, or yellow coloured salt. Sea salt contains minerals that are not suitable for a whirlpool. There are also salts available that vendors claim are suitable for whirlpool, but the content shows that these are mostly mineral-rich sea salt. Avoid using them.

Do not add anything in the whirlpool except for the salt (for whirlpools with a saltwater system) and the recommended pool chemicals. Avoid adding oils, perfumes, cosmetic products, etc.

Before entering the water, take a thorough shower to remove sweat and sunscreen from your skin. Sunscreens can damage both the PVC and the inner parts of the motor assembly.

### 3. Polluted water

- ☑ The filter/cartridge should be flushed daily or after each use. Replace the filter regularly with a new one (once every few days/weeks depending on the intensity of use of the whirlpool).
- ☑ The water must be clear. Keep the chlorine level in the whirlpool water between 2 and 4 ppm at all times.
- ☑ If the whirlpool water is green/milky or foamy, it is probably the reason for displaying the E90 code. See the manual for additional information on water treatment.
- ☑ Chlorine acts as a disinfectant and prevents the growth of algae and bacteria. The filter/cartridge only helps to catch mechanical particles in the water.

### 4. Damaged pump

If the filtration does not work and the whirlpool is still **under warranty**, **make a complaint at your dealer**. If the product is no longer under warranty, the filter pump can be replaced.



You may also check the ceramic axis and impeller inside the pump for damage. These parts are sold as spare parts and can be replaced.



Example of a damaged impeller in a filtration motor / pump.



If there is excessive calcium in the water for example, which clogs the pump, the pump needs to be cleaned.

**If the filter pump (filtration) does not work, neither does the heater and the saltwater system (sanitation) as the filter pump does not pump water out of the whirlpool, thus there is no circulation.**

## 5. Other reasons

Other reasons for the E90 error message and insufficient water flow may be clogged pipes (try flushing them with a garden hose), a faulty flow sensor or other parts of the motor base.

# QUICK TEST

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Before contacting service about the E90 error message, try a simple test first.

Unscrew the cartridge container (inner wall of the tub) and press the Filtration button. If you can feel the water flowing from the inlet, the circulation pump is working and you should focus on water quality and whether the filter cartridge is clean. If water quality is the problem, the E90 error message may even stop displaying when the filter is unscrewed.

If there is no flow from the inlet, then the circulation pump is defective and needs to be repaired or replaced.