

WATER HARDNESS (CALCIUM HARDNESS) IN HOT TUB: TROUBLESHOOTING FLOWCHART

IS YOUR WATER HARDNESS IN THE IDEAL RANGE?
Calcium hardness protects your spa equipment and helps prevent corrosion and scale.
IDEAL RANGE: 150–250 ppm

TEST YOUR WATER
Use a test strip or test kit.
Test Calcium Hardness (CH).
Ideal range: 150–250 ppm



BELOW 150 PPM

1 HARDNESS TOO LOW

Low calcium hardness can make water aggressive and cause corrosion.

SIGNS

- ✓ Water feels soft or slippery
- ✓ Corrosion on metal parts or heater
- ✓ Etching or dullness on acrylic surfaces
- ✓ pH drops frequently
- ✓ Water hard to balance



COMMON CAUSES

- Low calcium in source water
- New fill with soft water
- Partial drain with soft water added
- Overuse of certain chemicals



LOWER THAN 150 PPM?

Follow the steps below to raise hardness.
Goal: 150–250 ppm

IN RANGE (150–250 PPM)

2 HARDNESS IN RANGE

Great! Your calcium hardness is balanced. Keep it that way.



- ✓ Protects heaters, pumps, and surfaces
- ✓ Helps prevent corrosion and etching
- ✓ Supports clear, stable water
- ✓ Helps prevent scale when balanced
- ✓ Works with pH and alkalinity for best water quality



MAINTAIN YOUR BALANCE

Test water monthly and after refilling or major chemical adjustments.

ABOVE 250 PPM

3 HARDNESS TOO HIGH

High calcium hardness can cause scale, cloudy water, and equipment buildup.

SIGNS

- ✓ White scale on heater, jets, or waterline
- ✓ Rough or gritty surfaces
- ✓ White flakes in the water
- ✓ Cloudy water
- ✓ Filters clog quickly
- ✓ pH rises (especially with high alkalinity)



COMMON CAUSES

- Very hard source water
- Overuse of calcium increaser
- Evaporation increases concentration
- Infrequent water replacement



HIGHER THAN 250 PPM?

Follow the steps below to lower hardness.
Goal: 150–250 ppm

HOW TO RAISE HARDNESS (IF LOW)

1

TEST



Test calcium hardness to confirm the current level.

2

ADD CALCIUM HARDNESS INCREASER



Use calcium hardness increaser (calcium chloride) as directed. Add in small amounts.

3

CIRCULATE



Run jets for 20–30 minutes with cover open.

4

RETEST



Wait 2–4 hours before testing again. Repeat if needed.

5

RECHECK BALANCE



Keep pH 7.2–7.8 and alkalinity 80–120 ppm.

HOW TO LOWER HARDNESS (IF HIGH)

1

TEST



Test calcium hardness to confirm the current level.

2

HARDNESS REDUCER



Use a hardness-reducing pillow or bag near a return or circulation port.

3

PARTIAL DRAIN & REFILL



Partially drain and refill with lower-hardness water.

4

SEQUESTRANT (IF NEEDED)



Add a metal sequestrant if metals are present.

5

RETEST

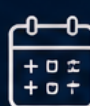


Retest after each adjustment. Repeat if needed.

BEST PRACTICES FOR BALANCED HARDNESS



Keep hardness in the ideal range: 150–250 ppm.



Test monthly and after refilling.



Keep pH between 7.2–7.8.



Keep alkalinity between 80–120 ppm.



Use a pre-filter if your source water is very hard.



Drain and refill every 3–4 months (or per your water replacement interval).



REMEMBER

Proper hardness protects your equipment and keeps your water clear, comfortable, and easy to maintain.

NOTE: Always follow product instructions and test your water regularly. | Good maintenance • Consistent testing • Balanced chemistry = Clear, clean, enjoyable water!