

## CLEANING INSTRUCTIONS FOR CAMUS® DYNAMAX® BOILER WITH SCALEBREAK®-MP

When descaling a Camus® DynaMax® boiler you will first need to visit our Camus® on-line calculation tool at [www.goodway/Camus.com](http://www.goodway/Camus.com) Here you will be able to obtain the proper amount of ScaleBreak®-MP and circulation time.

Keeping your Camus® boiler clean with ScaleBreak®-MP from water formed deposits is essential to efficient operation. Preventive maintenance cleanings of your boiler will give you a payback in reduced gas/propane consumption through clean efficient operation.

1. Shut down the boiler and allow it to cool to ambient temperatures.
2. Close all valves and isolate the boiler.
3. Located on the back of your DynaMax® boiler is two water ports, when facing the back, the cold water supply is on the upper right and hot water feed is on the lower right. These two ports are where you will hook up the circulation pump system to.
4. Depending on which model you have, the ports will range from 1"- 2" in diameter. To perform your chemical cleaning, two reducers, four nipples and two ball valves will be required to hook your circulation hoses.
5. Equip each port with a reducer, nipple, ball valve and a second nipple.
6. These valves can be closed to isolate the boiler should you need to shut your pump system down during the cleaning.
7. Attach your pump discharge to the cold water supply port on the upper right.
8. Attach your return hose to the hot water feed port on the lower left.
9. Elevate your return hose to the height of the top of your DynaMax® Boiler. This action will insure the heat exchanger inside does not become air bound with CO<sub>2</sub> during the cleaning procedure.
10. Fill your pump system with water, open your valves, turn your pump on and perform a hydrostatic test. This action assures the boiler is isolated and none of the ScaleBreak®-MP will be needlessly lost.
11. Once you have determined you have no leaks you will need to bleed off enough water equal to the volume of ScaleBreak®-MP required for the cleaning. If you relieve too much water, you can add some back to complete your circulation loop.
12. Water formed deposits will occupy volume, as a result, additional water may need to be added during the cleaning duration as deposits are dissolved.
13. Circulate the ScaleBreak®-MP solution for the recommended timeframe as indicated by our calculation tool.
14. During your ScaleBreak®-MP cleaning you will want to make sure your solution remains active. For this step, please follow our "Testing ScaleBreak's Effectiveness" procedure.
15. Once you have reached the recommended circulation time and your ScaleBreak®-MP solution has completed the job, you can begin your flushing process.
16. Though ScaleBreak®-MP is a biodegradable solution, most facilities need to conform to pH discharge limits. ScaleBreak® Neutralizer can be utilized to safely elevate your pH to meet your discharge limit so it can be flushed to the drain. Please follow the instructions for this process in the ScaleBreak® Neutralizer information sheet.
17. To flush your boiler, turn off your circulation pump, remove the return hose from your recirculation system and put it in a drain.
18. Add a fresh water hose to your recirculation bucket on your pump system and turn the pump back on.
19. Continue running clean water through the boiler until the return water is running clear. This action will also flush out your pump system.
20. As an added flushing safeguard, you can reverse the flow with the lever on the GDS pump system. This action will flush away any debris that may have settled out the bottom of the boiler. Please note: you will need to also change your drain hose configuration.
21. Disconnect your hoses, remove the reducers and valves and reconnect your cold water supply and hot water feed.
22. Your DynaMax® boiler can now be returned to service.

**Please note:**

- Follow all local regulations for discharge.
- Follow all plant personal protective equipment guidelines as determined by your health & safety team.
- ScaleBreak® formulas have very minimal corrosion rates, however, the application of ScaleBreak® may reveal pre-existing under-deposit corrosion (UD). This type of corrosion can present itself in the form of pitting, pin holes or similar types of damage.

**Please contact Goodway Technologies with any questions.**