



## CLEANING INSTRUCTIONS FOR MULTISTACK® CHILLERS WITH SCALEBREAK®-MP

When descaling brazed plate heat exchangers on Multistack chillers you will first need to visit our calculation tool at [www.goodway.com/multistack-calculator](http://www.goodway.com/multistack-calculator). This calculation tool will provide the proper amount of ScaleBreak-MP and circulation time needed to perform a cleaning.

1. Isolate the brazed plate heat exchanger from the system by closing the supply and return water valves.
2. Multistack® modular chillers are piped with Gruvlok® fittings. Unbolt the couplings and remove the 90° bend from both the top and bottom of the BPHE. Gruvlok® makes caps with a 1" threaded tap that can be used for the circulation process. These caps can be bolted into place to isolate the BPHE.
3. Position a ball valve on the low point of the cap isolating the brazed plate heat exchanger. This valve will function as the entry point for your ScaleBreak-MP cleaning and can be closed to prevent backflow if needed.
4. Attach your circulation hoses so you are pumping into the bottom of the brazed plate heat exchanger and returning the fluid out the top.
5. Your exit point on top will also need a threaded cap to attach your return hose. Position the cap so the threaded tap is at the highest point of the exchanger. If the exit point is lower than the top of the plate pack, position the hose at a higher point. This action will insure the entire plate pack is flooded and ScaleBreak-MP comes in contact with all the interior wetted surfaces. It will also insure upper interior areas do not become air bound with CO<sub>2</sub> or foaming resulting from the cleaning.
6. Fill your exchanger with water and perform a hydrostatic test by turning your pump on and circulating the water. This action assures the exchanger is isolated and none of the ScaleBreak-MP will be needlessly lost.
7. 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.
8. Water formed deposits will occupy volume, as a result, additional water may need to be added during the cleaning process as deposits are dissolved.
9. Periodically check your isolation valves as they may have initially seated against scale. As ScaleBreak dissolves the scale, this action will help you avoid losing product.
10. Circulate the ScaleBreak-MP solution for the recommended timeframe as indicated by our calculation tool.
11. During your ScaleBreak cleaning you will want to make sure your solution remains active. For this step, please follow our "Testing ScaleBreak's Effectiveness" procedure.
12. Once you have reached the recommended circulation time and your ScaleBreak-MP solution has completed the job, you can begin your flushing process.
13. 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.
14. To flush your heat exchanger, turn off your circulation pump, remove the return hose from your recirculation system and put it in a drain.
15. Add a fresh water hose to your recirculation bucket on your pump system and turn the pump back on.
16. Continue running clean water through the heat exchanger for 10 minutes or until the return water is running clear. This action will also flush out your pump system.
17. As an added safeguard you can reverse your hoses so you pump into the top and out the bottom. This action will flush away any debris that may have settled out the bottom of the exchanger.
18. Disconnect your hoses and remove the Gruvlok caps. Reinstall the original fittings and turn your supply water back on. Check your fittings for leaks and tighten the couplings if needed.
19. Your Multistack chiller can now be returned to service.

Additional information can be found at: [www.goodway.com/multistack](http://www.goodway.com/multistack)

### Please note:

- Follow all local regulations for discharge.
- Follow all plant personal protective equipment guidelines as determined by your health & safety team.
- ScaleBreak-MP has very minimal corrosion rates, however, the application of ScaleBreak may reveal pre-existing under-deposit corrosion (UD) or microbiologically influenced corrosion (MIC). These types of corrosion can present themselves in the form of pitting, pin holes or similar types of damage.

Please contact Goodway Technologies with any questions.



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