## Activation procedure for Calc Feeder PRO reactor:

1. Pour some grit into the utility chamber up to 2 cm below the tube that combines both chambers of the reactor.

2. Mixing and utility chambers shall be pre-filled with water.

3. Both chambers shall be sealed. Connect the hose equipped with a (closed) valve to  $CO_2$  reflow joint on the cover and on the pump connection.

4. Connect the pump along with the controller to water intake in the mixing chamber (the hose at the pump opening shall be placed under water).

5. Detach CO<sub>2</sub> feeding hose from the reactor and activate Refil mode of the pump's controller.

6. Wait until water outflows through  $CO_2$  joint in the mixing chamber cover.

7. In the meantime, adjust  $CO_2$  flow from the cylinder to approx. 4 bubbles per second.

8. When water flows through  $CO_2$  input joint on the cover, attach the hose and the  $CO_2$  valve to the  $CO_2$  joint.

9. Continue filling up the utility chamber until water flows out through water output hose in the utility chamber cover. The hose shall be placed under water.

10. Deactivate Refil mode and then push 'pause' button on the controller to stop the metering pump.

11. Attach optimeter and  $CO_2$  solenoid valve to the controller (prior to attaching, the power unit of the controller shall be disconnected!)

12. Start-up Aqua bee circulating pump.

13. Deactivate CO<sub>2</sub> alarm in options of the controller.

14. Leave the reactor for a few to several hours to make water carbonated.

15. Upon stabilisation of the reactor, pH shall be checked; it should fall below 7. By the model of the reactor and the type of grit that was used, ph – upon saturation – shall be 6.2 to 6.7.

Should this value fail dropping, do not start-up flow on the metering pump as saturation has not been completed yet. If some gas is present in the mixing chamber and nevertheless upon 24 hours pH value still fails dropping to a required level then it is necessary to check tightness of the reactor covers and the hose joints; presumably some air flowed into the mixing chamber thus the activation procedure shall be repeated.

16. Re-activate  $CO_2$  alarm (as it enables acknowledging deficiency of gas in the  $CO_2$  cylinder)

17. Adjust flow on the metering pump in a manner as to obtain appropriate amount of reflux from the reactor.

18. Upon 24 hours, re-check reflux pH. If it is too high, then  $CO_2$  flow should be increased by 1-2 bubbles per second.