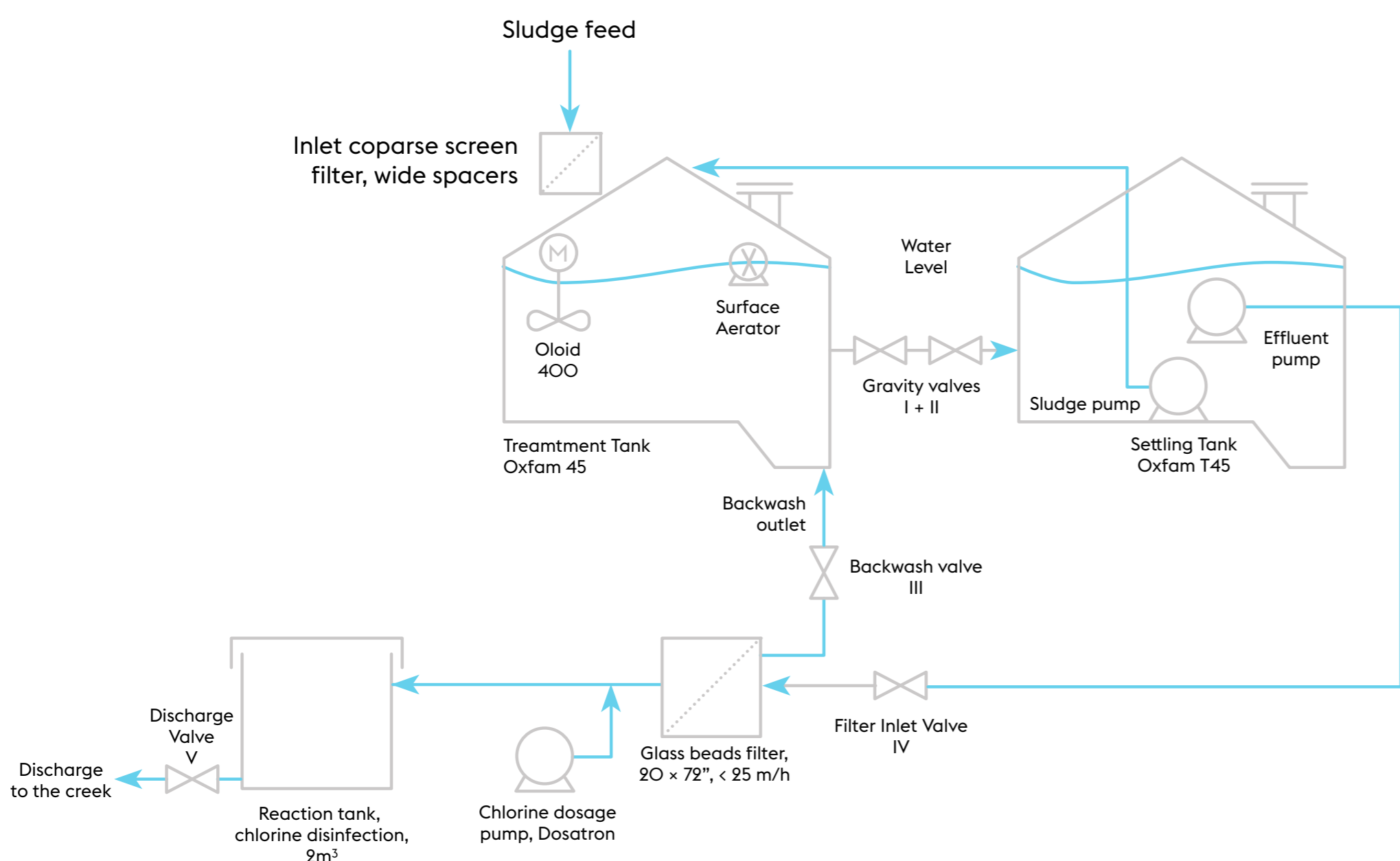


Aerobic faecal sludge treatment package for deployment to acute emergencies



In 2018 IFRC piloted an aerobic waste treatment unit in the Bangladesh Population Movement Operation. Further improvements to the still operating system are being made and planning is underway for additional testing of a scaled up unit in other contexts. The treatment plant is accompanied by a faecal sludge field laboratory.

Frequently Asked Questions

What does it do?

Treat a variety of faecal waste streams in emergency settings.

Does it smell?

You will have to visit the site to smell for yourself, but the pilot unit has produced no noxious odours or attracted insects. One can stand next to the unit without realizing it's 45 m³ of human waste.

Does it work?

Yes, much better than expected. The pilot is small, too small for the tanks we chose. But we are seeing substantial COD reduction and parasite elimination. We believe that the planned larger unit (specs available at www.emergencysanitationproject.org) will achieve the required COD and pathogen reduction.

Is it expensive?

Our capital cost is less than \$10 per person served and operational costs, which will reduce further when renewable power

is installed, is estimated at \$5 per m³ treated.

Is it big?

The larger unit is designed to fit in a 40 ft container and, when assembled, use 200 m² of land, making it an efficient use of land in congested settings.

Is it complicated?

We recommend that a wastewater expert be deployed with the unit. The Red Cross Red Crescent is beginning to build a pool of deployable technical teams for faecal sludge treatment and lab testing.

Isn't all faecal sludge management context specific?

Yes, but aerobic treatment is in use all over the world. Outside of extreme cold climates, the main challenge with deploying aerobic treatment is the sus-

tainability issues (cost, spare parts, technical support) present in all low income settings. However, we are developing a short to medium term solution for acute emergencies. As with emergency water treatment, there are different considerations in the emergency context.

What is so innovative about it?

The treatment process is established but the equipment we are using is novel for sludge treatment in emergencies. Surface aeration and mixing combined with flat pack tanks allows us to send the equipment anywhere, set up quickly, and easily operate and maintain the plant.

What's next?

A bigger, better system and more trials to demonstrate the unit can work almost anywhere.