



## Organic Concentrator **ETWW** with Pasteurisation

- Improves income from the AD site & RHI
- Reduces costs for distributing & storing digestate
- Sealed process with zero emissions
- Produces high quality concentrated liquid fertiliser

### The Benefits for Anaerobic Digestion

- Concentrates nutrients particularly N, P & K within the digestate.
- Increases the total available nitrogen per m<sup>3</sup> of fertiliser.
- Reduces the volume of fertiliser distributed by vehicles and spread to land.
- Up to 4 times reduction in fertiliser volume.
- Significantly reduces digestate lagoon volume, taking the pressure out of NVZ's.
- Can utilise waste heat from the on-site CHP plant or fossil fuels.



### Introduction

Our ETWW system is optimised to produce high quality liquid fertiliser for land using low quality digestate from Anaerobic Digestion. It is a unique process producing no emissions to air. All process liquid is available either as a high value fertiliser or in the form of grey water for re-use on site.

### Concentration

The level of concentration achieved is determined by carrying out lab scale concentration and laboratory chemical analysis. These tests accurately determine precisely how much concentration can be achieved, and the levels of valuable nutrients N, P & K post concentration. The process will produce two output streams - concentrated fertiliser and grey water for re-use on site.

### Pasteurisation

Pasteurisation of the liquid fraction can be achieved by operating the concentrator in batch mode. The Concentrator throughput is calculated to achieve a one hour residency time at 72C within the process chamber. Pasteurisation helps achieve compliance with PAS110 requirements..

### Operating Costs

The ETWW process uses low temperature heat from the onsite CHP units, putting the often wasted resource to good use. This produces a high quality fertiliser in lower volumes so reducing the cost of transport and spreading.

### Renewable Heat Incentive

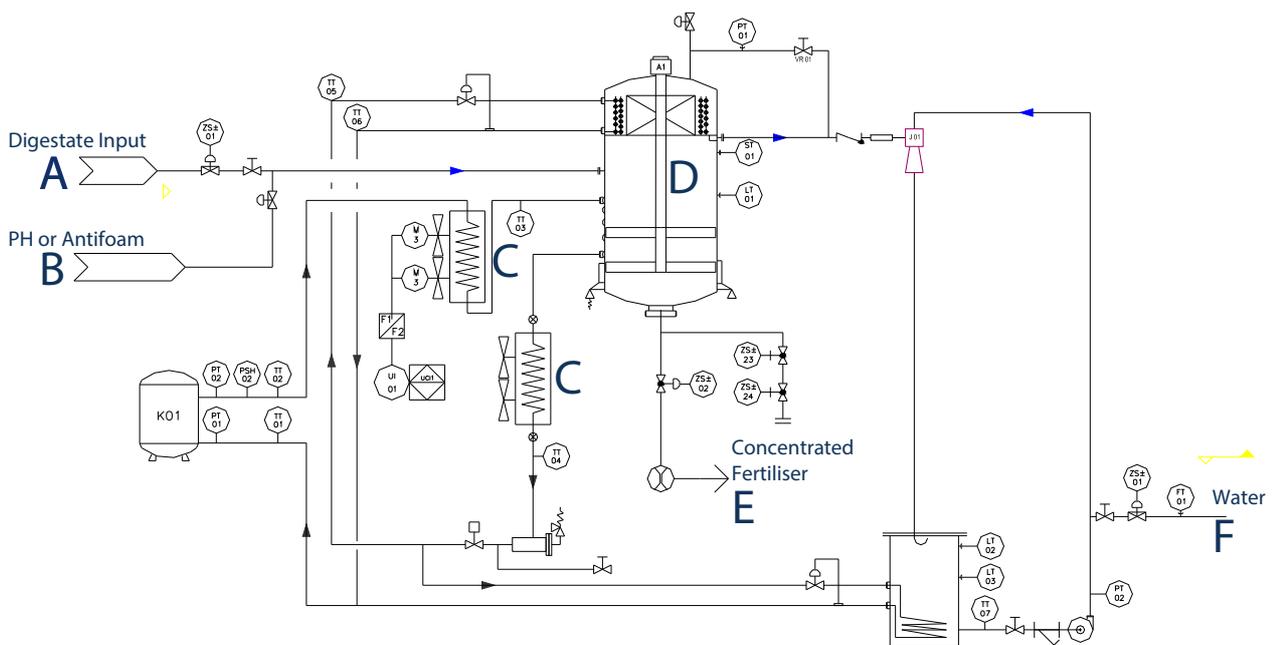
The ETWW is classed as a process and, subject to site eligibility, can be classed as an eligible use of heat under the Commercial RHI Scheme.

**ETWW Range - Single Stage \***

\*. Twin and Three stage systems available.

Model	Digestate Input m3/day **	Heat Requirement (85-90C)	Concentrated fertiliser Produced m3/day	Reduction by Volume	Grey Water m3/day
ETWW 8000-1	12	250 kW	4	33.3%	8
ETWW 16000-1	24	500 kW	8	33.3%	16
ETWW 32000-1	48	1000 kW	16	33.3%	32

\*\* The Digestate throughput is an estimated figure based on reducing the digestate to 33.3% of its original volume. The final volume reduction will be determined by lab scale tests and chemical analysis of the digestate.



-  A - Input of Liquid Digestate
-  B - Input of Anti Foaming or PH Adjustment
-  C - Heat Exchangers
-  D - Concentration & Pasteurisation Chamber
-  E - Concentrated Fertiliser Output
-  F - Water for Recirculation

**Method Of Construction**

\* AISI 316 L/Ti