FITEC CAN HANDLE THE PROCESS.

COARSE CONTAMINANT SEPARATION PHASE

IT STARTS WITH WASTE

Organic Waste to Receiving Bunker

RECEIVING BUNKER

01

RECEIVING & CONDITIONING

Opening of bio and plastic bags, films and packaging. A slow speed shredder reduces hard particle sizes of wood, metal, glass, bones, and shells to under 40 mm.

CONDITIONING

Before entering the BioSqueeze, waste is conditioned by shredding, mixing and adding process liquids if needed.

02

SEPARATION

THE BIOSQUEEZE REMOVES CONTAMINANTS TO PRODUCE A HIGH SOLIDS AND ENERGY DENSE BIOPULP.

Two fractions come out of the BioSqueeze: Biopulp and Contaminants.

Contaminants (<12 mm)

Sent to a second BioSqueeze or are taken for off-site processing.

Biopulp

Advances to our Pumps, where they are then fed to our Pasteurizing system.

C

BIOSQUEEZE

BP

KV20 BALL VALVE PUMP

03

PASTEURIZING

FROM HERE, THE BIOPULP IS SENT THROUGH OUR FULLY AUTOMATED DOUBLE-TUBE PASTEURIZING SYSTEM WHERE IT IS HEATED TO A MINIMUM OF 70°C BEFORE BEING FED TO THE DIGESTER.

This step serves a dual purpose of also being a temperature control system for the digester.

DOUBLE-TUBE HEAT EXCHANGER AND HOLDING TANKS

S

Substrate

Hot and ready for conversion to biogas and contaminant removal

FINE CONTAMINANT SEPARATION PHASE

04

DIGESTION

ENERGY-RICH BIOPULP GOES INTO FITEC'S SELF-CLEANING DIGESTER SYSTEM AND BEGINS TO FERMENT.

SELF-CLEANING DIGESTER

THE DILUTION THAT RESULTS FROM THE DIGESTION EFFECTIVELY SEPARATES CONTAMINANTS INTO LIGHT AND HEAVY FRACTIONS.

Light Fractions

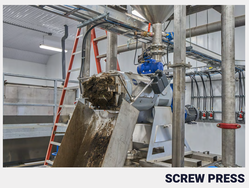
Heavy Fractions

SKIMMING AND PLASTICS REMOVAL

The light fraction of contaminants (such as plastics) floats to the surface of the digester, where it is skimmed out, pumped into a screw press, and then filtered for disposal.

GRIT PUMP

As heavy contaminants settle, they are continuously collected into a grit pump by the automated floor sweeper. Clean Digestate is decanted back into the digester. The grit is collected and removed for off-site processing.



SCREW PRESS

Floating Contaminants for off-site processing

FC

AGITATORS & FLOOR SWEEPER

Sinking Contaminants for off-site processing

SC

LF

HF

Biogas

D

Digestate

The clean Digestate that is produced exceeds the strictest global standards for digestate quality and is ready for value-added processing.

DIGESTER AND BIOGAS END-STORAGE

05

BIOGAS PRODUCTION

FROM ORGANIC WASTE WE HAVE RECOVERED THE GREATEST AMOUNT OF ORGANIC MATTER POSSIBLE TO PRODUCE A MAXIMUM AMOUNT OF CLEAN ENERGY.

This saves landfill space and makes the most of the resources we have available to us.

BG

Biogas

For use in local energy grids as renewable natural gas and/or renewable electricity.

IT ENDS WITH BIOGAS

FROM END TO END.