



TeamTec

SIMPLY BETTER



eUnit

WASTE - TO - ENERGY SOLUTION BY TEAMTEC

TeamTec

TeamTec's history stems from a tradition of marine industrial activity in Tvedestrand, Norway, that dates back to around year 1700. Today our company is one of the world leaders in marine waste incinerating systems and stripping ejectors / eductors to the shipping and offshore industry.

Since February, 2016 TeamTec has been appointed by one of the world's leading chemicals companies, Evonik Resource Efficiency GmbH as the global marketing partner with responsibility for manufacturing, sales and service of the AVITALIS™ ballast water treatment system.

TeamTec has also expanded its product range with a new land based, modular Waste-to-Energy solution, the TeamTec **eUnit WtE**.

We are proud to supply our quality products and services to a broader market base and are committed to mirror our leadership role from the demanding shipping and offshore market to also include the land based markets.



TeamTec eUnit WtE
Local Waste - Local Energy

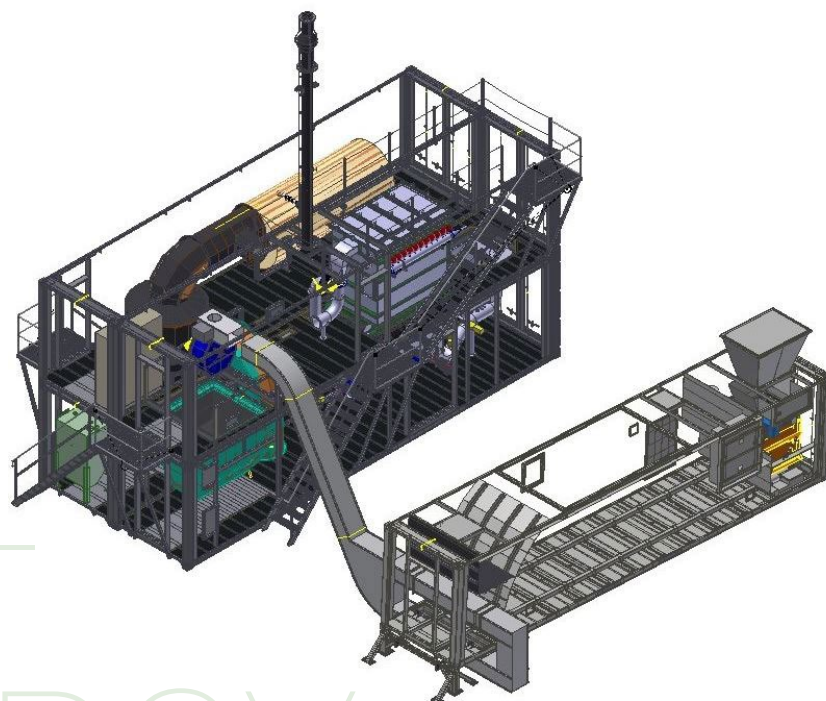


TeamTec eUnit

The eUnit is an “all inclusive” modular container based Waste-to-Energy (WtE) plant

The eUnit allows small communities around the world to safely handle and eradicate their local waste and in addition benefit from the energy generated by converting thermal energy from the flue gas into hot water & electricity.

By doing so, the eUnit not only prevents community health and environmental hazards, but also minimizes the need to occupy valuable land areas as waste sites.



WASTE-
TO-ENERGY

ADVANTAGES:

- High quality, modular container solution
- Advanced technology
- First class partners
- Environmentally benign
- Safe and Reliable
- Fully automated control
- Remote operation support
- Rapid installation & commissioning
- Low operating costs
- Low maintenance costs
- Low power consumption
- Low fuel consumption
- Small footprint
- Ease of shipping



- SMALL ISLAND COMMUNITIES
- SMALL OR REMOTE TOWNS
- HOSPITALS
- HOTEL RESORTS
- AIRPORTS
- MILITARY FACILITIES
- REFUGEE CAMPS
- DISASTER ZONES
- INDUSTRY

LET THE **eNIT** DOWNSIZE YOUR LANDFILL AND
CREATE ENERGY FROM YOUR GARBAGE!

NO MORE
DANGEROUS WASTE
GROUNDWATER CONTAMINATION
DISEASE CARRYING SOURCES
ODORS FROM ROTTING GARBAGE
UNSIGHTLY VIEWS
IN YOUR LOCAL
ENVIRONMENT

TECHNICAL SPECIFICATIONS

SUITABLE WASTE STREAMS

- Municipal solid waste
- Industry waste
- Medical waste
- Waste-oil
- Biomass
- Tires

OPERATIONAL OVERVIEW

Specification	Details & Values
Yearly operating capacity	8000 hr
Waste handling capacity	approx. 5 tons/day (200 kg/hr)
Waste storage capacity	approx. 3 days capacity
Total energy production (dependent on configuration & type of waste)	hot water approx. 500 kW & electric power 5 to 20 k W
Filter system hydrated lime consumption	approx. 6 ,3 kg/hr
Filter system pulverized activated carbon consumption	approx. 0,1 kg/hr
Filter water consumption	65 liter/hr
Diesel tank	700 liter (only needed at start-up)
Waste oil tank	700 liter (will be used as fuel)
Safety water tank	1500 liter
Waste water tank	3500 liter (used for injection to combustion process)
Disposable bottom ash (dependent on type of waste)	approx. 5 - 20% of waste input
Disposable filter dust	approx. 6 ,3 kg/hr (classified as hazardous waste)
Main power supply (provided by customer)	TN-S system 3 phases + neutral and PE 400V / 50Hz / 100A fuse (other options available on request). The specification for the correct intake cable depends on physical length and installation method
Internet VPN connection (provided by customer)	Cat5 or Cat6 cable with RJ45 plug System can be adapted to wireless system or with GSM antenna

PLANT/CONTAINER OVERVIEW

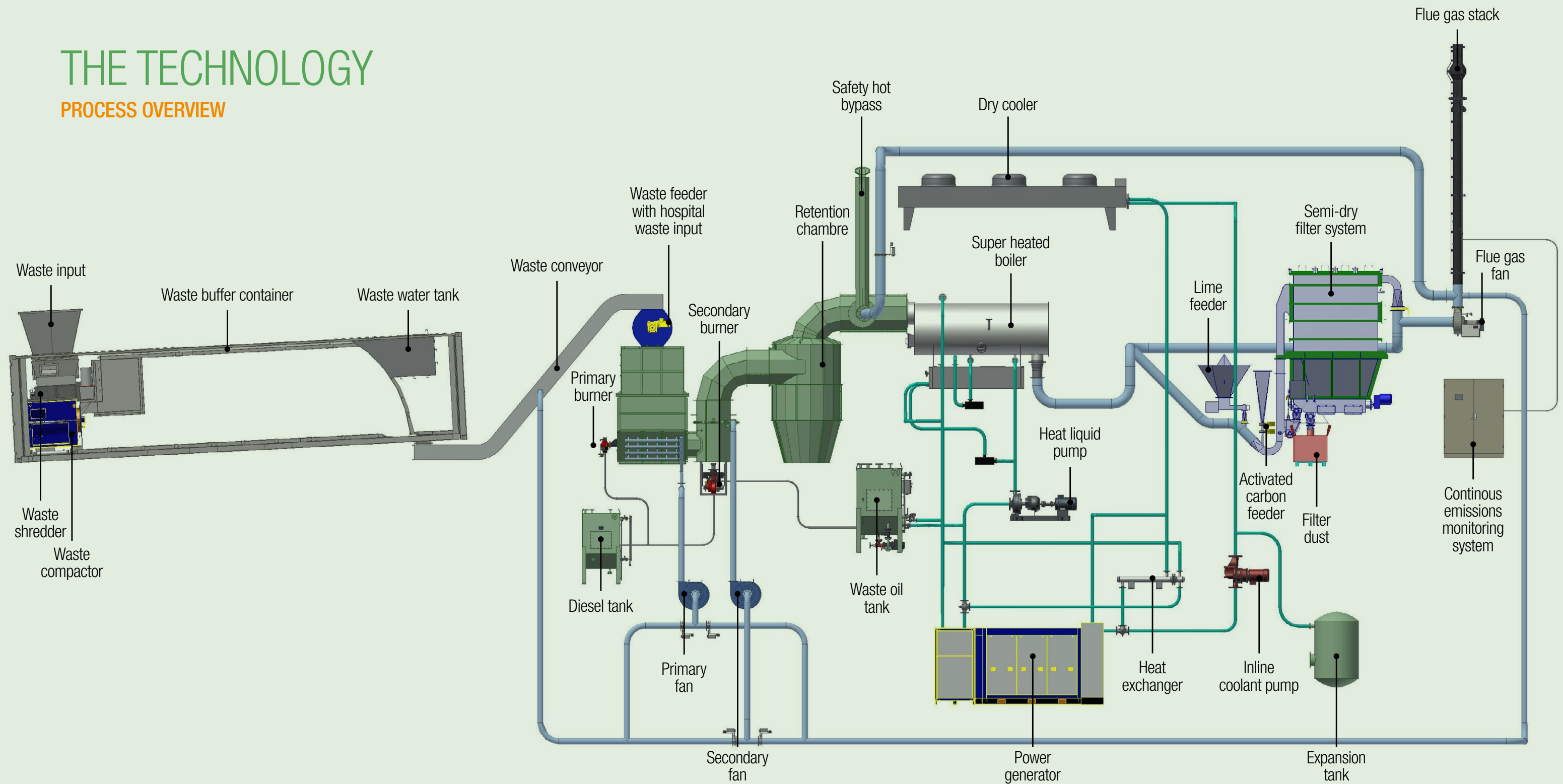
Specification	Details & Values
Container type	High Cube 40 foot shipping container (5 units)
Container type	30 m2
Total footprint installed (not including necessary access points)	170 m2
Total weight	approx. 70 tons

SITE REQUIREMENTS

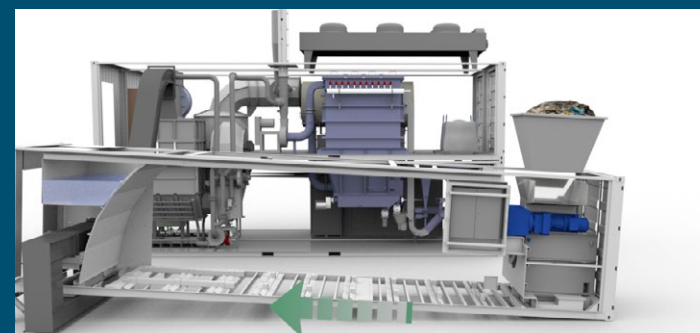
Requirement	Responsible
Land area should be level and compact	Customer
Necessary permits (operational, environmental, waste handling etc.)	Customer / local regulation
Waste source for incineration (MSW, industry, medical, waste oil amongst others)	Customer
Safe disposal for bottom ash, filter dust	Customer
Power availability	Customer
Water availability (tap water quality)	Customer
Fuel/Diesel	Customer
Infrastructure outside of plant needed for delivery of energy (Hot water & Electricity)	Customer

THE TECHNOLOGY

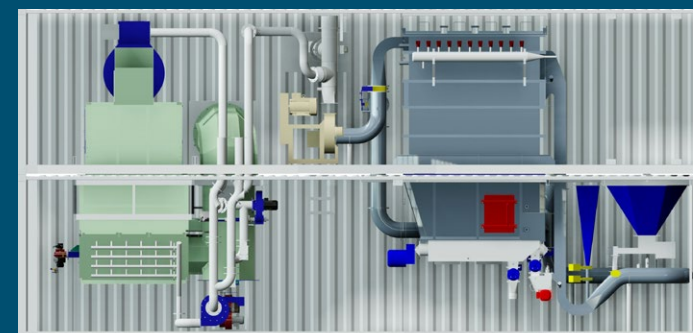
PROCESS OVERVIEW



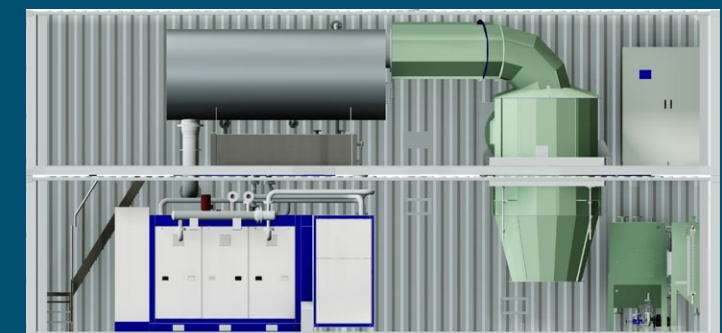
Layout - TOTAL PLANT



Interior - FRONT VIEW



Interior - CONTAINER 1 & 2



Interior - CONTAINER 3 & 4



STRATEGIC PARTNERS



Sensor Intelligence.

SICK AG • CONTINUOUS EMISSIONS MONITORING SYSTEM
“Future-Oriented Emissions Monitoring”

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 7,400 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, SICK is always close to our customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

SICK is the only manufacturer worldwide in this area with a complete portfolio for emission measurement technology. SICK uses innovative technologies and proven measurement principles to ensure future-oriented solutions – even when subjected to ever increasing environmental and safety-related requirements.



GE • SEMI-DRY NID™ FLUE GAS TREATMENT SYSTEM

“We have been setting the benchmark in clean power solutions for over a century.”

As leaders in the industry for over 130 years, GE has a rich history, built on engineering, innovation and technology.

GE is a leader in design, innovation, manufacture and construction of air quality control systems, with decades of experience providing equipment for major industries. GE provides solutions for waste-to-energy plants complying with the strictest emission regulation.



SCHNEIDER ELECTRIC • AUTOMATION & CONTROL

“Schneider, the global specialist in energy management and automation”

Schneider Electric develops connected technologies and solutions to manage energy and process in ways that are safe, reliable, efficient and sustainable. The Group invests in R&D in order to sustain innovation and differentiation, with a strong commitment to sustainable development.



VIKING DEVELOPMENT GROUP • RENEWABLE POWER GENERATION

“Providing Renewable Energy at A Low Cost”

With the CraftEngine, waste is not a problem. It's an opportunity to help businesses grow and communities thrive. As an integrated module in TeamTec's eUnit, we take the heat produced from combustion of garbage and transform it into something that benefits people, business and our planet.



PARAT HALVORSEN • EXHAUST GAS BOILER

“Parat Halvorsen boilers are in daily use in all corners of the world”

Parat is a leading supplier of specialized heating solutions to demanding customers around the world. The company has a long and proven track record of deliveries to both land based and offshore installations. Parat is known for their quality and reliability and the products have in many cases been known to outlast the vessel or facility in which they were installed. Today the main projects have a significant clean energy focus and the company strives to help clients find the most sustainable solutions for their vessel or facility.

AFTER SALES

TeamTec provides comprehensive after sales service for all TeamTec products.

SPARE PARTS

- Tailored spare part kits
- Prolonged life-time of the units
- Trouble-free operation
- Avoid unnecessary downtime and costs
- Parts in stock can be sent the same day as the order is received

SERVICE

A combination of experienced and highly qualified staff plus extensive know-how guarantees our customers will receive the highest level of customer care.

Our service department provides the following:

- Commissioning
- Repair service
- Pre-installation survey

Service agreement and training:

- Annual service visits
- Technical seminars
- Required training and updating

CONTACT US
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eunit

WASTE-TO-ENERGY (WtE) SYSTEM

BY TEAMTEC



LOCAL WASTE – LOCAL ENERGY!



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