



LUCAS[®] PLUG & PLAY

THE FAST TRACK LUCAS[®] SOLUTION



WATERLEAU

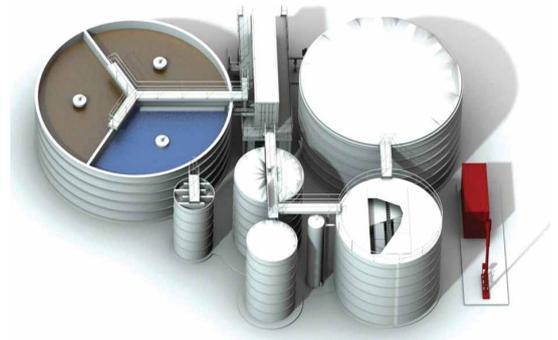
protecting the 4 elements

THE FAST TRACK LUCAS® SOLUTION

A new brewery to be built or the expansion of an existing one needed, governments pushing to implement a wastewater treatment plant, high concrete costs in your region, encountering building risks : do these problems sound familiar to you? If so, the LUCAS® Plug & Play might be just the solution you are looking for.

LUCAS® TECHNOLOGY

Waterleau's LUCAS® Plug & Play wastewater treatment concept is based on Waterleau's proprietary LUCAS® technology and consists either of a separate LUCAS® anaerobic and LUCAS® aerobic treatment plant, or one combined anaerobic-aerobic treatment plant. Today, more than 80 breweries throughout the world have installed an effluent treatment plant based on Waterleau's LUCAS® technology.



The concept of the LUCAS® aerobic technology is based on a hybrid activated sludge system combining the advantages of the SBR and conventional technology and disregarding the disadvantages of both technologies. The LUCAS® wastewater treatment plant consists of 3 hydraulically connected tanks of which two are in aeration while a third is in sedimentation.

As all the walls between the reactors are shared, both the civil cost and erection time is faster compared to a conventional system. The LUCAS® anaerobic technology is a UASB-based anaerobic reactor.

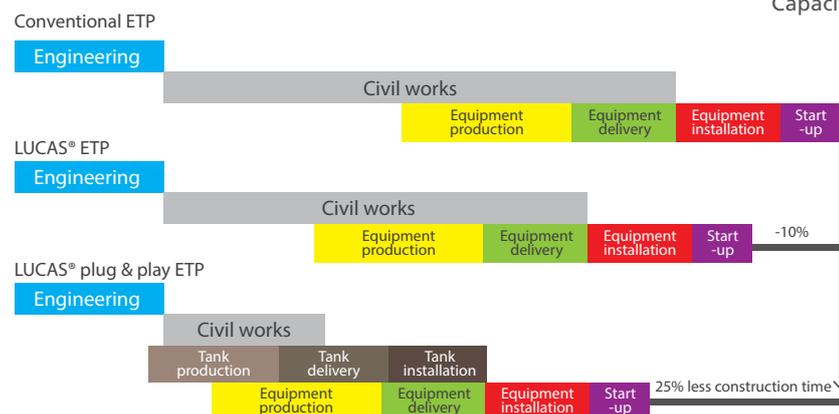
A REAL BREAKTHROUGH

Thanks to its compact design, the LUCAS® concept allows a significant 10% gain in construction time. In order to overcome time consuming civil works Waterleau has developed an innovative, robust, modular and fast erection Plug & Play concept.

The basic idea behind the Plug & Play concept is the design of a meccano-like plant in which most of its components are modular and pre-assembled. The reactors are made of glass coated steel, allowing a faster construction compared to a concrete-based design. At the time the tank slabs are being poured, the tanks are also in production. And once the tank pouring has coming to an end, the glass coated steel tanks are delivered on site. The erection of the steel tanks completed, the team can start installing the mechanical and electrical equipment. Local conditions allowing, equipment installation can even start during the tank installation.



Castel, Lomé - Togo
LUCAS® anaerobic + re-aeration
Capacity: 2.450 m³/d - 7.500 kg COD/d



The LUCAS® effluent treatment design allows shorter construction time. The LUCAS® Plug & Play design allows to gain up to 25% of the needed construction time compared to a conventional ETP design.

COBRA® INTELLIGENT PROCESS CONTROL

In the LUCAS® Plug & Play concept, the core of the ETP is designed and pre-assembled in a 40 ft COBRA® container unit. The COBRA® (CORE and BRAins) contains all the influent distribution, effluent collection, excess sludge wasting systems. Flanges on the outside of the COBRA® connect with the system's pipes on site. All intelligent control systems are placed within the COBRA® (valves, flow meters, pressure transmitters, ...). The only work to be done on-site is to connect the flanges with the reactor!

The compact and preassembled design of the process control unit adds to the flexibility and speed in the construction process. A prefab module, designed with laboratory equipment, PLC, SCADA and electrical cabinet can be pre-mounted at Waterleau's production facilities and shipped after being dry tested. By doing so, the on-site electrical installation works are reduced to a minimum.



ADVANTAGES PLUG & PLAY®	
COMPACTNESS	<ul style="list-style-type: none"> ▪ LUCAS® plant lay-out ▪ Common walls ▪ Less civils
SPEED	<ul style="list-style-type: none"> ▪ Reduction of up to 25% in construction time ▪ Pre-mounting of COBRA®: reduced installation works
FLEXIBILITY	<ul style="list-style-type: none"> ▪ COBRA® intelligent control system
SAVINGS	<ul style="list-style-type: none"> ▪ Smaller footprint ▪ Speed in construction ▪ Optimal process control (COBRA®)

LUCAS[®] PLUG & PLAY: THE COMPACT & EFFICIENT EFFLUENT TREATMENT PLANT, A SOLUTION FAVOURED BY THE TOP-5 GLOBAL BREWERS

DESIGN
ENGINEERING
CONSTRUCTION
OPERATION
MAINTENANCE

PROTECTING THE 4 ELEMENTS



We all have the responsibility to handle our natural resources in a careful and sustainable way. Waterleau develops environmental technologies and offers sustainable solutions for water, air and waste treatment, as well as for energy recovery. As an EPC contractor and operator, Waterleau counts more than 1000 references for municipal and industrial clients around the world.



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Radioweg 18, 3020 Herent (Leuven), Belgium
t. +32 (0) 16 65 06 57 - f. +32 (0) 16 65 06 63
info@waterleau.com - www.waterleau.com