

TILLQUIST

Peco Facet[®]
a CLARCOR company

Advanced Wastewater Treatment Technology



CLARCOR is a global provider of filtration products and services. We offer the industry's broadest product range with more than 80,000 filter types, superb product quality, leading brands, extensive distribution network and technical expertise to serve customers worldwide.

CLARCOR provides Total Filtration from a single source by bringing together the products, experience and expertise of our companies to meet all your filtration and wastewater treatment needs. This collaboration insures that customers receive the best filtration and on-time delivery directly to each business location to protect people, equipment and the environment.

CLARCOR offers the broadest array of filtration products, technologies and services to meet current and future filtration and wastewater treatment requirements. Our customers, worldwide, depend on CLARCOR filtration products to fuel their future.

CLARCOR provides unparalleled customer value with filtration solutions for water, fuel, oil, air and gas in every stage and aspect related to its particulate field. We optimize equipment reliability and power output to reduce equipment downtime and unplanned power outages.

CLARCOR is positioned to meet your Total Filtration and service needs.

PECOFacet Wastewater Treatment Technology

PECOFacet provides filtration and separation technologies to serve the world's natural gas, petrochemical, refining, marine, offshore and aviation industries. With over 75 years of industry knowledge, engineering vision, ongoing research, and a vast network of resources, PECOFacet continually produces innovative contaminant management solutions for an ever-changing industry landscape and an environmentally conscious world.



PECOFacet's advanced wastewater treatment technology consists of a package plant that performs an aerobic biological treatment thanks to its prolonged aeration type, the active sludge recirculation process and the ozone disinfection system.

Sewage Treatment Plants



PECOFacet's STP series Sewage Treatment Plants for inland applications have been designed for gravity or pumping treatment of domestic sewage.

Population areas

They can be installed above or below the ground. These plants carry out the sewage treatment by biological means using active sludge aerobic and extended aeration, without requiring any other kind of dosing or additivation.



The plant consists of three chambers (aeration, settling and discharge - disinfection) which have been arranged to facilitate transport and installation. Every chamber has the necessary access and inspection registers. This modular construction allows the increase of the processing capacity by placing more plants in parallel.



The air diffusers responsible for the oxygenation and agitation of the water to be treated are placed within the aeration chamber. The biological filter and the pipes that re-circulate sludge and grease towards the aeration chamber, are located in the settling chamber. The settling is pressurized in this chamber facilitating the deposition of solids.



All the instruments and control elements of the plant are housed inside an anti-vandal cabinet. The connection between the instruments which are inside the cabinet and the plant is throughout pipes of the corresponding section. an ozone disinfection process.

Gardens
Golf courses
Public Street Cleaning
Resorts
Small residential groups
Hotels
Camp Sites

Applications of treated water



MAÑÓN
A CORUÑA
Bares fishing port

Equivalent Inhabitants: 308
Summer Equivalent Inhabitants: 730
Treated Flow Rate: 37,215 m³/year
Discharge: Atlantic Ocean



COLES
OURENSE
Rural area of Levices

Equivalent Inhabitants: 270
Treated Flow Rate: 17,310 m³/year
Discharge: Miño River



GUNTÍN
LUGO
Historic Villa of Ferreira de Pallares

Equivalent Inhabitants: 258
Treated Flow Rate: 19,730 m³/year
Discharge: Ferreira River





A MERCA
OURENSE
Rural area of A Manchica

Equivalent Inhabitants: 351
Treated Flow Rate: 24,360 m³/year
Discharge: Barbaña River



A PEROXA
OURENSE
Touristic Villa of Os Peares, Rail Station

Equivalent Inhabitants: 386
Treated Flow Rate: 33,200 m³/year
Discharge: Miño River



A PEROXA
OURENSE
Touristic Villa of Os Peares, Popular River Beach

Equivalent Inhabitants: 88
Treated Flow Rate: 7,610 m³/year
Discharge: Miño River

A PEROXA
OURENSE
Forest area of Armental

Equivalent Inhabitants: 214
Treated Flow Rate: 15,500 m³/year
Discharge: Armental Creek



CASTRELO DE MIÑO
OURENSE
Vineyard of Vide. Denomination of Origin Ribeiro Wine

Equivalent Inhabitants: 124
Treated Flow Rate: 9,010 m³/year
Discharge: Dam of Castrelo de Miño



FUERTEVENTURA
LAS PALMAS
CANARY ISLANDS
Residential Hotel

Equivalent Inhabitants: 500
Treated Flow Rate: 42,625 m³/year
Discharge: Atlantic Ocean





LEIRO
OURENSE

Vineyard area of Vieite. Denomination of Origin of Ribeiro Wine

Equivalent Inhabitants: 126
Treated Flow Rate: 10,360 m³/year
Discharge: Avia Fish River



NOGUEIRA DE RAMUÍN
OURENSE

Spa of Santo Estevo. Touristic Route of Ribeira Sacra

Equivalent Inhabitants: 382
Treated Flow Rate: 27,480 m³/year
Discharge: Sil River



PETÍN
OURENSE

Capital Town of Council

Equivalent Inhabitants: 404
Treated Flow Rate: 34,240 m³/year
Discharge: Dam of Santiago. Sil River

SAN MAMEDE
OURENSE
Outside Town of Ourense City
Provincial Capital

Equivalent Inhabitants: 310
Treated Flow Rate: 26,100 m³/year
Discharge: Barbaña River



VILAMARTÍN DE VALDEORRAS
OURENSE
Capital Town of Council

Equivalent Inhabitants: 1,092
Treated Flow Rate: 91,600 m³/year
Discharge: Sil River



CAMBADOS
PONTEVEDRA
Historic-Artistic Town of Cambados

Equivalent Inhabitants: 189
Treated Flow Rate: 17,250 m³/year
Discharge: Ría de Arousa (Atlantic Ocean)
Shellfish Waters





A VEIGA
OURENSE

Council Capital. 865 m above sea level

Equivalent Inhabitants: 1,238
Treated Flow Rate: 84,700 m³/year
Discharge: Dam of Prada, Jares Fish River



EL MÉDANO
SANTA CRUZ DE TENERIFE
CANARY ISLANDS

Holidays Beach Resort

Equivalent Inhabitants: 2,500
Treated Flow Rate: 215,000 m³/year
Discharge: Irrigation of condominium gardens



EL MÉDANO
SANTA CRUZ DE TENERIFE
CANARY ISLANDS

Holidays Beach Resort

Equivalent Inhabitants: 2,500
Treated Flow Rate: 215,000 m³/year
Discharge: Irrigation of condominium gardens

ARNOIA
OURENSE
Rural area of A Reza

Equivalent Inhabitants: 216
Treated Flow Rate: 14,200 m³/year
Discharge: Miño River



LAIAS
OURENSE
Spa and Old People's Residential Complex

Equivalent Inhabitants: 377
Treated Flow Rate: 24,400 m³/year
Discharge: Miño River



BOQUEIXÓN
A CORUÑA
Rural area of Deseiro de Abaixo, on the Pilgrimage Route "Camino de Santiago"

Equivalent Inhabitants: 1,000
Treated Flow Rate: 91,250 m³/year
Discharge: Saramo Creek



Sewage Treatment Plants

PECOFacet Sewage Systems with integrated vacuum have been designed for the treatment of black water (coming from W.C., urinals and hospitals) and grey water (sinks, showers, laundry and galley) generated onboard ships. This treatment consists of the purification, and later disinfection, of water in order to achieve a quality effluent meeting all legislative requirements.

These plants treat sewage biologically, meaning they are of the active sludge, prolonged aeration, aerobic type.

PECOFacet STP plants are built in a single steel module to ease transportation and onboard installation.

- Meet Marpol Annex IV Requirements, 8(1)(b) and 9.1.1 Regulations, as well as IMO Resolution MEPC-2(VI), MEPC-159(55), CE Standards 96/98/EC and 98/85/EC.
- They do not generate sludges that must be unloaded.
- Fully automatic operation driven by PLC.
- Explosion proof design (ATEX).



Built-In Vacuum Systems

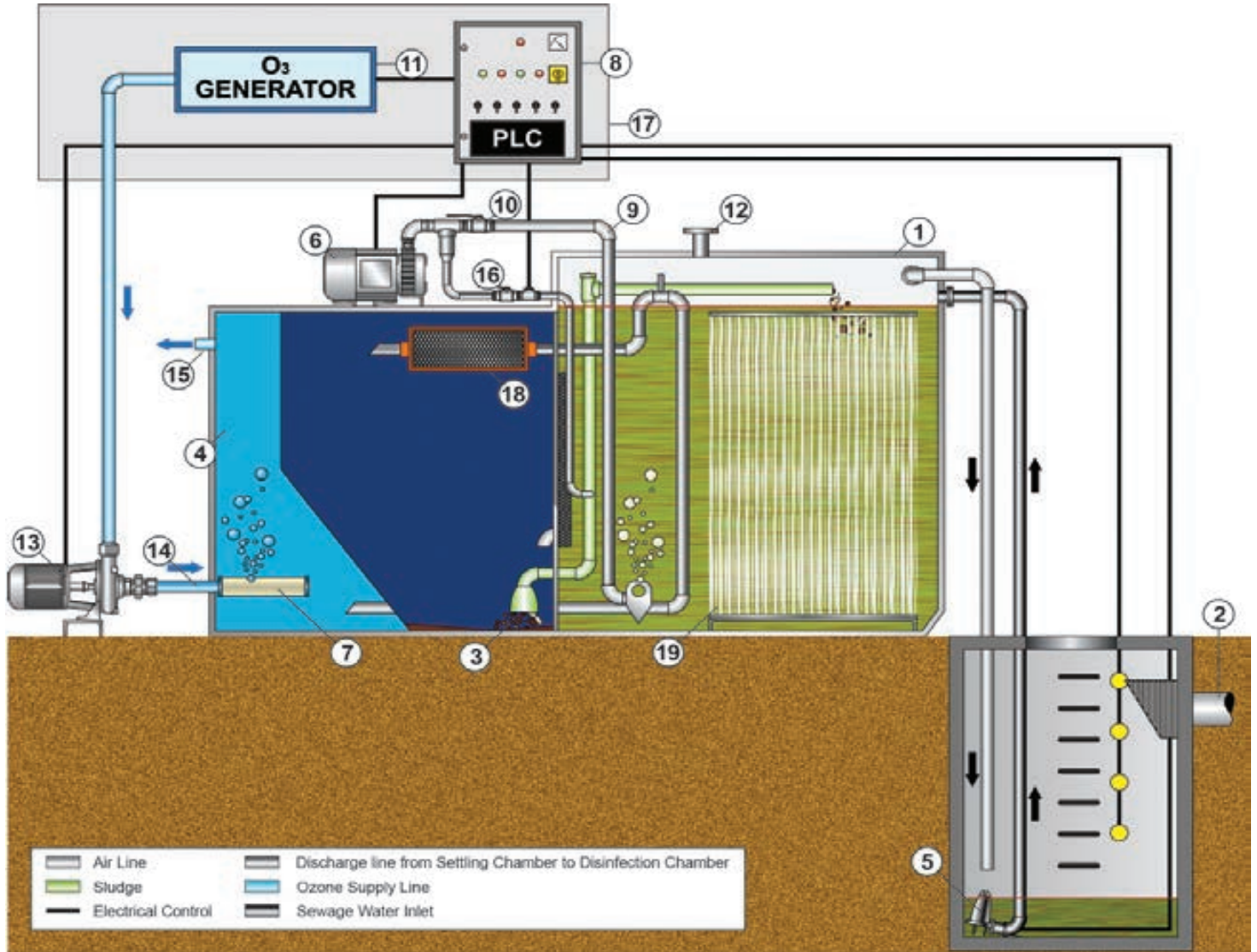
PECOFacet's unique VTP built-in vacuum system transports black water along the piping system to the treatment plant.

The vacuum in the circuit is achieved automatically with an ejector and circulating pump.

VTP plants are built in a single steel module to facilitate transportation and onboard installation. Inside this module there are three specially designed chambers for aeration, settling and disinfection. These chambers are oriented in such a way as to guarantee correct operation and avoid sludge generation. Each chamber has been provided with an access and inspection register. The plant comes completely assembled and tested so that installation onboard is very quick.



Flow Diagram



- | | |
|---------------------------------|-----------------------------------|
| 1 - Aeration chamber | 11 - Ozone generator |
| 2 - Black water inlet | 12 - Vent (to atmosphere) |
| 3 - Clarifier chamber | 13 - Circulation pump (optional) |
| 4 - Disinfection chamber | 14 - Ozone supply line (optional) |
| 5 - Suction pump | 15 - Discharge |
| 6 - Blower | 16 - Manual valve |
| 7 - Ozone ejector (optional) | 17 - Control cabin |
| 8 - PLC (Program Logic Control) | 18 - Lamellar biological filter |
| 9 - Air Supply | 19 - Bioreactor |
| 10 - Manual valve (air supply) | |

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