epTAS systems ……from epeco

for wastewater collection, transfer,
treatment & reuse

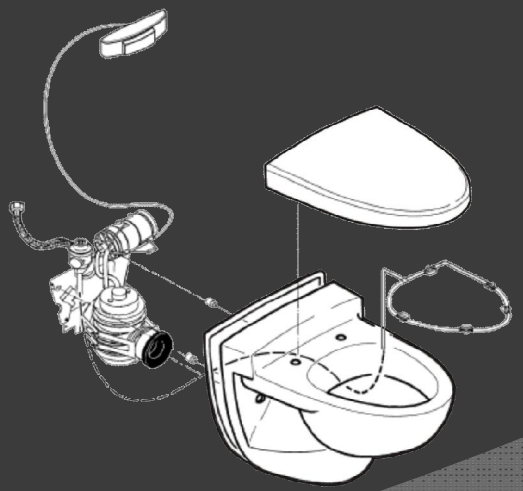
epTAS ……the Systems

The **epeco**'s Total Aqua Solutions **epTAS**, are designed to collect, transfer, treatment & reuse wastewater indoor buildings from small villas up to sky-high towers.

Indoor networks can be "combined" for mixed black & gray waters which is used after treatment for irrigation. The indoor networks can be "split" into independent gray & black water networks, where black water can be discharged to the domestic sewer line or treated and reused for irrigation. Gray water can be treated and reused for irrigation and/or domestic non-potable water applications (toilet flushing, fire fighting, floor cleaning,……etc.).

epTAS systems……how it works?

In **epTAS** systems, wastewater is collected in toilets, urinators, baths, sinks, bidets and/or floor drains, where flow is controlled by manual or automatic vacuum valve. The wastewater is transferred to central vacuum tank via vacuum sewer line, thereafter, wastewater is either discharged to the domestic sewer network or to the treatment & reuse plant.



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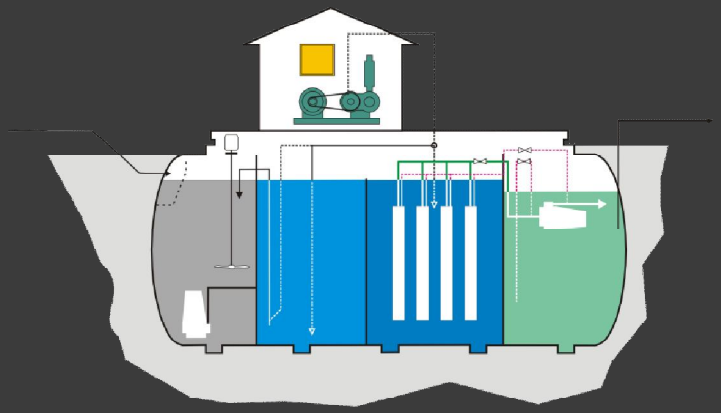
epTAS systems, ‘optionally’ incorporates wastewater treatment & reuse systems **epMBR,** which treats wastewater to the highest international standards, producing effluent suitable for domestic non-potable water applications.



epTAS systems……
for Vertically Integrated Systems
epVAC.VIS+epMBR

for
-Villas
-Buildings
-Towers
……..and more

epTAS systems……
for Vertically Integrated Systems
epVAC.VIS+epMBR

Mixed wastewater (gray & black) is collected and transferred via combined vacuum sewer line **epVAC.VIS** to the central vacuum tank, then discharged to the wastewater treatment & reuse plant, followed by double disinfection (chlorination & ultraviolet) and ultrafiltration prior to reuse in irrigation.

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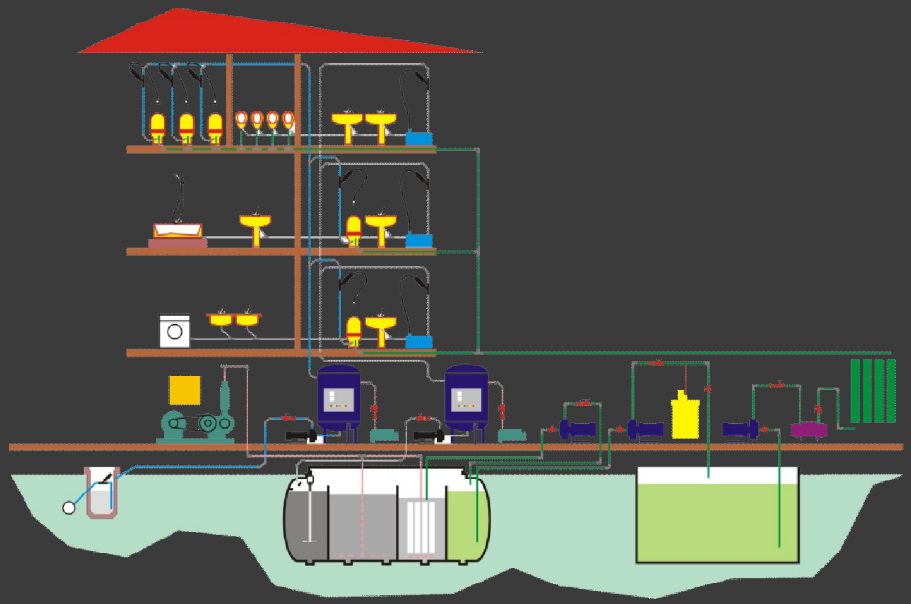
epTAS systems……
for Vertically Integrated Systems



Wastewater is independently collected in gray and black water networks-**epVAC.VIS** . Black water can be discharged to the domestic sewer network while gray water can be treated in wastewater treatment and reuse plant epMBR, then reused for domestic non-potable water applications (toilet flushing, fire fighting, floor cleaning,……etc.). **epeco** provides double disinfection (chlorination & ultraviolet) & ultrafiltration prior to reuse.

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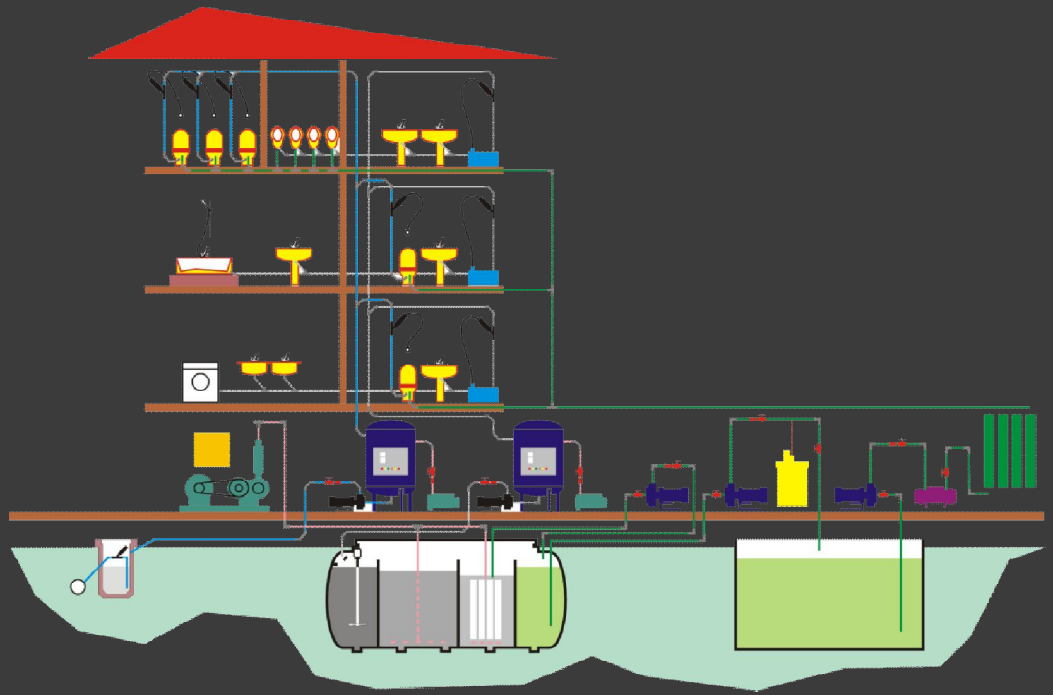
epTAS systems……
for Vertically Integrated Systems



Treated effluent can also be reused for irrigation.

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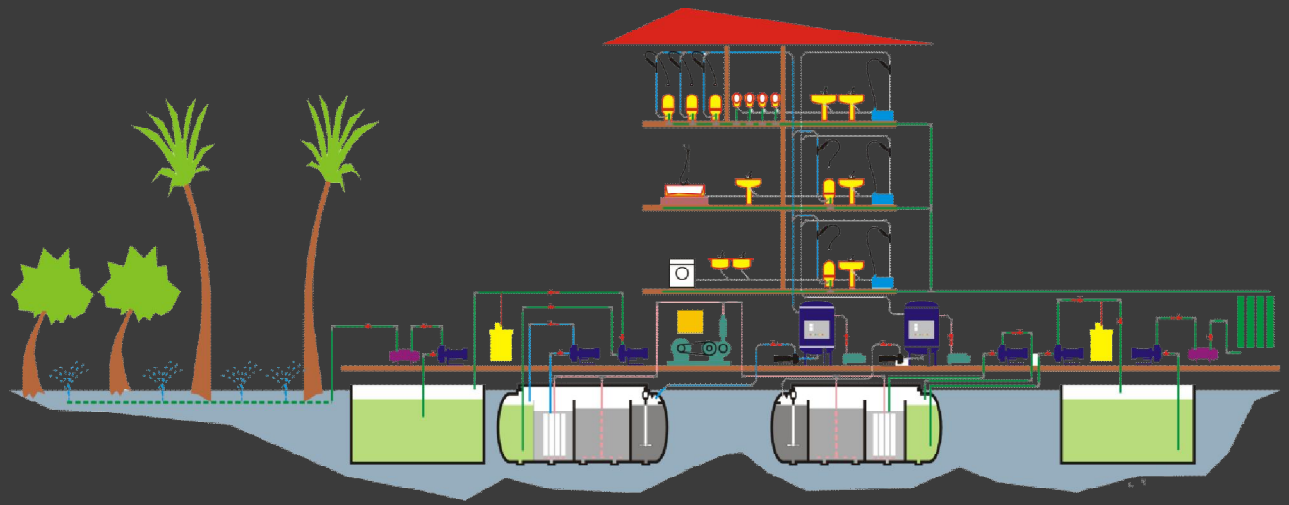
epTAS systems……
for Vertically Integrated Systems



Wastewater is independently collected in gray and black water networks-**epVAC.VIS** . Black water can be treated in wastewater treatment and reuse plant epMBR followed by double disinfection (chlorination & ultraviolet) prior to reuse , then reused for irrigation Gray water can be treated in gray water epMBR plant, double disinfected (chlorination & ultraviolet) & ultrafiltered prior to reuse in domestic non-potable water applications.

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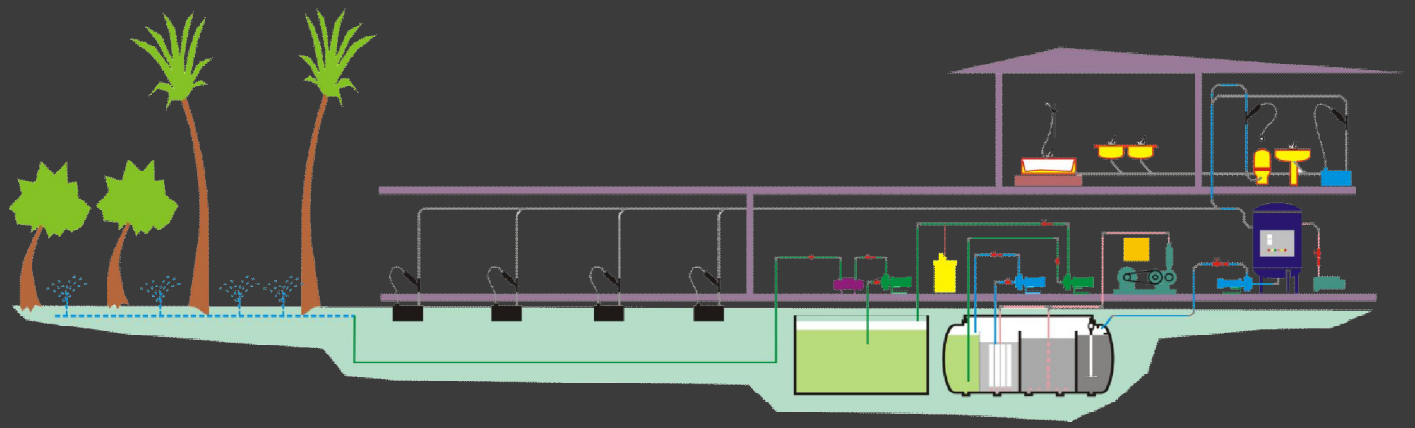
epTAS systems……
For Horizontally Integrated Systems
epVAC.HIS+epMBR

for
-Factories
-Supermarkets
-Schools,
-Shopping Centers,
…….....……..and more

epTAS systems……
for Horizontally Integrated Systems



Mixed wastewater (gray & black) is collected and transferred via combined vacuum sewer line **epVAC.HIS** to the central vacuum tank, then discharged to the wastewater treatment & reuse plant, followed by double disinfection (chlorination & ultraviolet) prior to reuse in irrigation.

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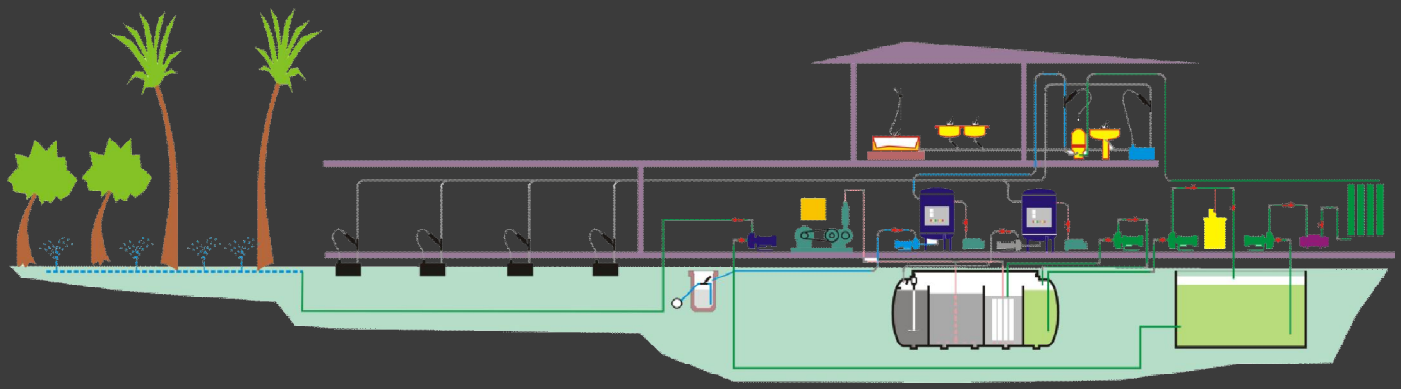
epTAS systems……
for Horizontally Integrated Systems



Wastewater is independently collected in gray and black water networks-**epVAC.HIS** . Black water can be discharged to the domestic sewer network while gray water can be treated in wastewater treatment and reuse plant epMBR, then reused for domestic non-potable water applications (toilet flushing, fire fighting, floor cleaning,……etc.). **epeco** provides double disinfection (chlorination & ultraviolet) & ultrafiltration prior to reuse.

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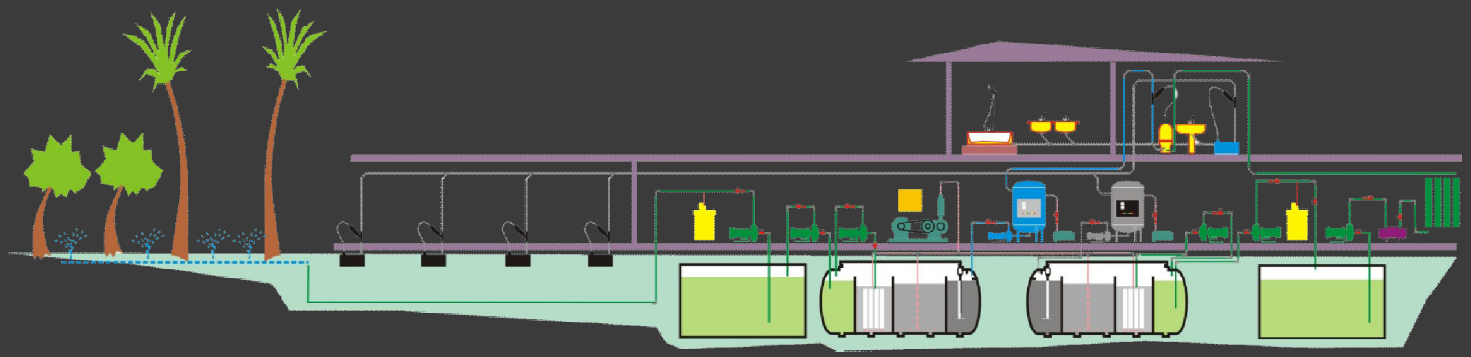
epTAS systems……
for Horizontally Integrated Systems



Wastewater is independently collected in gray and black water networks-**epVAC.HIS** . Black water can be treated in wastewater treatment and reuse plant epMBR followed by double disinfection (chlorination & ultraviolet) prior to reuse , then reused for irrigation. Gray water can be treated in gray water epMBR plant, double disinfected (chlorination & ultraviolet) and ultrafiltered prior to reuse in domestic non-potable water applications.

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epTAS systems……
for low density population-flat & extended areas
epVAC.VSS+epMBR

for
-Housing Compounds
-Touristic Resorts
-Parks & Gardens
-Airports
-Marinas & Harbors
-Caravan Parks
-Industrial Areas
……..……..and more

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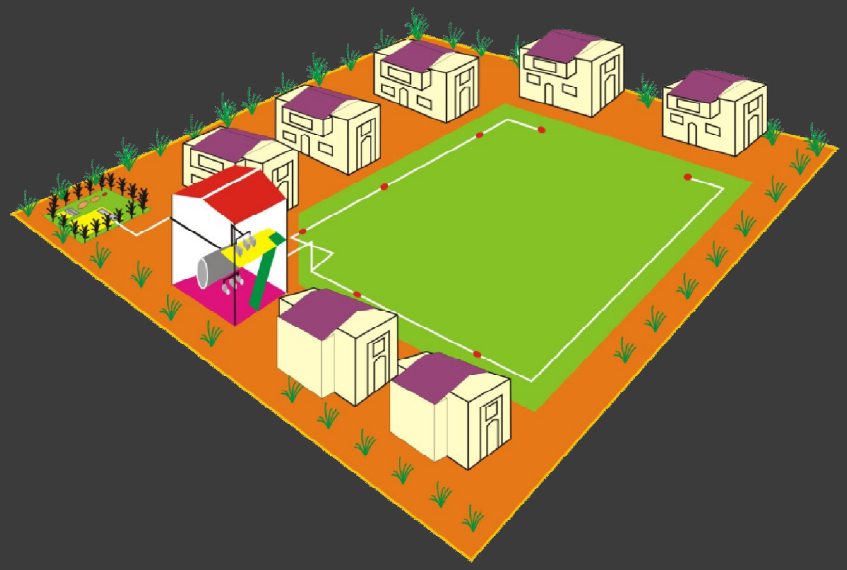
epTAS systems……
for low density population-flat & extended areas



epVAC.VSS collects and transfers black & gray water (independently or combined), to the wastewater treatment plant **epMBR**, followed by double disinfection (chlorination & ultraviolet) prior to reuse in irrigation. Additionally prefiltration can be used for reuse in domestic non-potable water applications.

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epTAS systems……
for independent gray, black & highly contaminated
waste water collection & transfer

for

-Chemical Industries
-Petrochemical Industries
-Slaughterhouses
-Milk & Dairy Plants
-Food & Beverage Industries
……..……..and more

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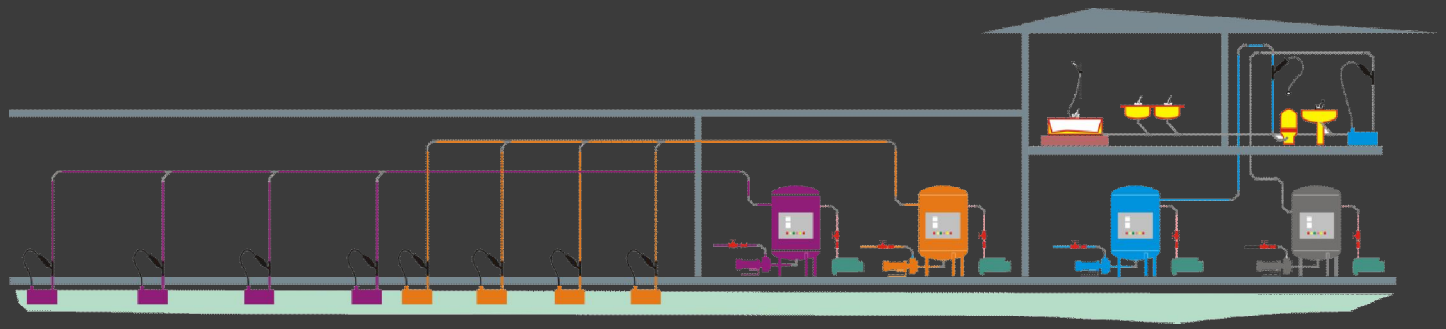
epTAS systems……
for independent gray, black & highly contaminated waste water collection & transfer



epVAC.VSS collects and transfers black & gray water (independently or combined), to the wastewater disposal point or to the domestic sewer network. Wastewater can be treated in **epMBR** plants followed by double disinfection (chlorination & ultraviolet) prior to reuse in irrigation. Gray water can be treated, disinfected and prefiltered prior to reuse in domestic non-potable water applications.

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epTAS systems……why?

- Saving up to 40% of the capital cost/ plumbing due to using smaller pipes & fittings.
- Reducing construction time due to using prefabricated sub-systems- factory built, tested and ready for quick installation.
- Saving up to 25% of the total energy consumptions due to eliminating gravity paths and pumping stations.
- Conserving fresh water- due to using less water for flushing toilets (2 liters/flush)& urinators (1 liter/flush). Fresh water consumption can be cut up to 60% if treated gray water is recycled for domestic non-potable water applications (toilet flushing, fire fighting, floor cleaning,……etc.), while gray water is recycled for irrigation.
- Low operating cost due to high reliability, low maintenance, less energy consumption, less fresh water consumption, low waste discharge fees and high returns on investment.
- Eco friendly operations due to reducing fresh water consumption, reducing waste discharge and less energy consumption.
- Safe operations due to capability of collection, transfer and treatment of wastewater or highly contaminated wastewater in closed systems.

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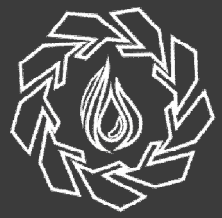

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10, Taiaran Str., Raba'a al adawia,Nasr City
Cairo 11371, Egypt

Tel: +20 2 2401 2488 Fax: +20 2 2401 6626
e.mail:magdi@epeco.com www.epeco.com