

Grey Water Treatment System

PACT

PACT INDUSTRIAL AND MUNICIPAL WATER AND
WASTE WATER TREATMENT EQUIPMENT & PLANTS



PACT GREY WATER TREATMENT SYSTEM



ISO9001-2000 Certified for Design, Manufacturing and Servicing of
Standard and Custom-Designed and built Equipment and Plants

WHAT IS GREY WATER

Grey water is defined as waste water, collected separately from sewage flow, that originates from clothes washer, bathtub, shower or sink, but not from a kitchen sink, dishwasher or toilet.

Grey water is distinguished from "black water," which is waste water from toilets, kitchen sinks and dishwashers. Black water should not be reused in the home because of high risk of contamination by bacteria, viruses and pathogens.

WHAT IS IN THE GREY WATER

Grey water may contain fats, oil, grease, hair, lint, soaps, cleansers, fabric softeners and other chemicals. Grey water can also contain elevated levels of chlorides, sodium, borax and sulfates and have a high pH(is alkaline) that may be harmful to some plants.

WHY USE GREYWATER ?

As water is precious and a lot of water is wasted during flushing of toilets it is a waste to use drinking quality water for the same. This can be achieved by treating grey water. Also this treated water can be used for irrigation in some cases.

WHAT IS GREY WATER TREATMENT

Grey water treatment is removal of unwanted suspended material from the grey water collected and disinfecting the same to make it useful for toilet flushing or irrigation or discharging to sewer lines according to the local laws applicable.

ADVANTAGES

- ◆ Lower fresh water use
- ◆ Less strain on failing septic tank or treatment plant
- ◆ Greywater treatment in topsoil is highly effective
- ◆ Ability to build in areas unsuitable for conventional treatment (compact)
- ◆ Less energy and chemical use
- ◆ Groundwater recharge
- ◆ Plant growth
- ◆ Reclamation of otherwise wasted nutrient

WHY PACT GREY WATER TREATMENT

- ◆ It is a compact treatment plant
- ◆ Occupies less space
- ◆ Most of the equipments are skid mounted
- ◆ Simple operation
- ◆ Aeration of raw water tank to avoid foul smell
- ◆ Customized design can be provided as per clients requirement.

PACT GREY WATER TREATMENT CAPACITIES

- ◆ Grey Water system capacity can be of 5m³ to 150m³/days
- ◆ Customized designs can be provided as per clients requirement
- ◆ It can cater to a variable range of population

APPLICATIONS

- ◆ Residential areas
- ◆ Hotels & Resorts
- ◆ Workers / labourers accommodations at construction sites
- ◆ Rehabilitation sites
- ◆ Remote sites
- ◆ Offshore Installations*

* For oil & gas applications explosion proof models are available.

THE WORKING OF PACT GREY WATER TREATMENT SYSTEM

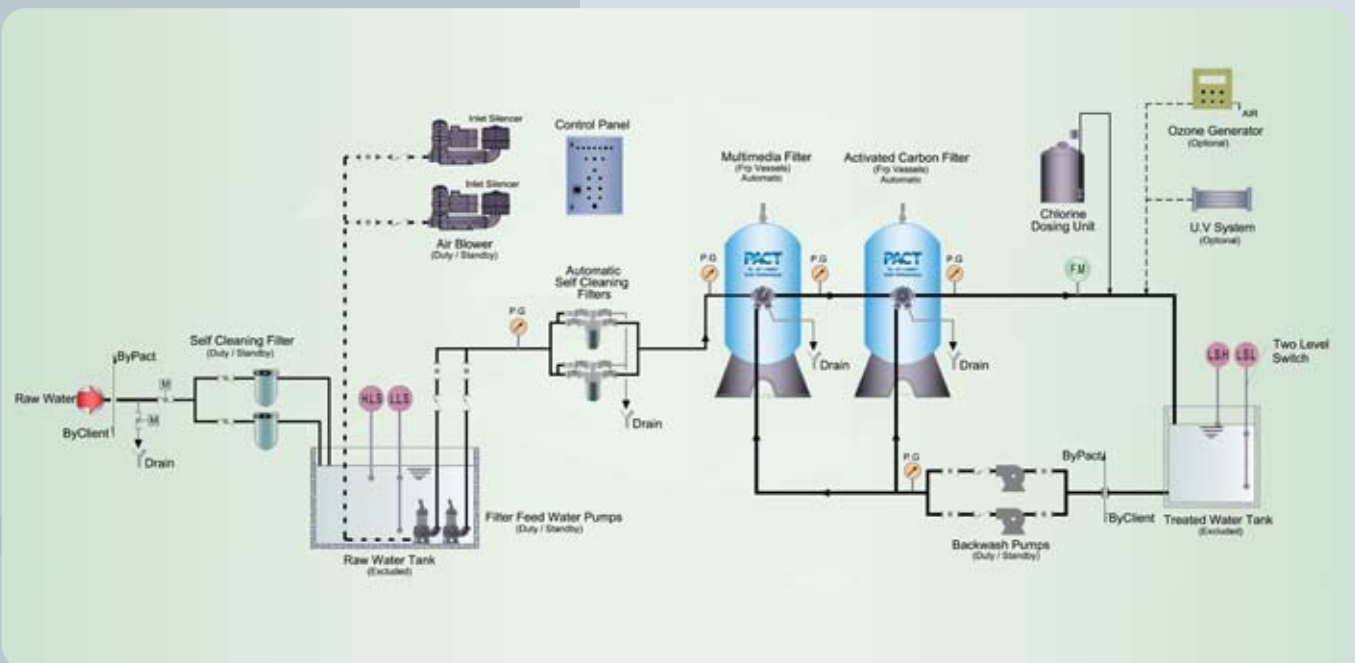
Feed pump will pump the Grey Water from Raw Grey Water tank (provided by client) it to the self cleaning filter whiels than bassen to sand media filter.

Air blowers are provided to mix air in the raw grey water tank. This serves twin purpose of mixing the raw grey water (which is coming from different sources) and removal of odour by providing sufficient oxygen, thereby avoiding septicity of raw water. A suitable coagulant (Optional) is dosed so as to facilitate removal of suspended solids depending on characteristics of grey water.

After sand media filter the water goes to activated carbon filter where odour / traces of hydrocarbons etc are removed. The exhausted sand media filter and carbon filter are backwashed by a separate backwash duty pump using treated Grey Water. The filtered water is free from suspended solids and odour and is disinfected by an appropriate amount of chlorine which is continuously dosed by a dosing pump. Additionally ozonation or/and ultra violet sterilizer can also be provide for disinfection depending on application and clients requirement.

All equipment are provided as working & stand by.

The treated Grey Water is sent to treated water tank (by client).



GREY WATER TREATMENT PLANTS

Model No	Capacity (m ³ /day)	Population (persons)	Outlet Conditions (BoDs/TSS)	Raw Grey Water Tank volume (m ³)*
PGW 5	5	40	20/20	5 m ³
PGW 10	10	80	20/20	10 m ³
PGW 25	25	250	20/20	25 m ³
PGW 50	50	450	20/20	50 m ³
PGW 75	75	650	20/20	75 m ³
PGW 100	100	1000	20/20	100 m ³
PGW 150	150	1350	20/20	150 m ³
PGW 200	200	1800	20/20	200 m ³
PGW 250	250	2200	20/20	250 m ³
PGW 350	350	3000	20/20	350 m ³
PGW 400	400	3500	20/20	400 m ³

*Please confirm with local municipality requirements.

ASSUMPTIONS: 110 LIT/PERON/DAY

- ◆ *PACT Calculation is based on the discharge of 110 litres/person/Day.
- ◆ Raw grey water intake pump sanction is up to 3 – 4 m. In case sanction level is more, please contact us.
- ◆ The vertical distance between the L.W.L. in gray water tank & gray water system is 4 m.

SCOPE OF SUPPLY

- ◆ Raw water feed pump - Qty : 2 Duty / Standby
- ◆ Strainer Qty : 2
- ◆ Motorized valve Qty : 2
- ◆ Self cleaning filter - Qty : 2 Duty / Standby
- ◆ Back wash pump - Qty : 2 Duty / Standby
- ◆ Air Blower - Qty : 2 Duty / Standby
- ◆ Sand Filter Automatic
B.W
- ◆ Activated Carbon Automatic
B.W
- ◆ MCC Panel & PLC
- ◆ Instrument
-Water level switch
-Pressure gauge

ADDITIONAL/OPTIONAL SYSTEMS CAN BE PROVIDED BASED ON CLIENTS REQUIREMENTS LIKE:

- ◆ Disinfection of treated water by UV/ozonation.
- ◆ Automation for sand media and carbon filters.
- ◆ Raw and treated water tank in FRP or PP.
- ◆ Final polishing cartridge filters.
- ◆ Odour dosing system.
- ◆ Skid for Inlet strainer and motorised valve(Optional)
- ◆ Coagulant dosing set.





PACT is an ISO 9001-2000 accredited specialist manufacturer and supplier of industrial and municipal water and wastewater treatment equipment and plants.

PACT products are the result of years of interaction between PACT engineers, end-users and contractors.

The standard design shown in the attached bulletin may be used as a reference, however, custom design is the norm rather than the exception. PACT builds the equipment to suit the individual application and the governing standards.

PACT engineers have a broad range of expertise in physical, chemical, biological and membrane processes for water and wastewater treatment. In every discipline PACT provides numerous process choices to solve complex treatment problems effectively and economically.

PACT sales and service network has global coverage through company owned regional offices as well as through appointed representatives. This network of service centers and the head office form an integrated organization to serve all users.

The following range of PACT products are each covered by a detailed technical bulletin. Ask for the specific bulletin by name when asking for details also inquire about other water and wastewater products that are not shown here.

PACT products fall into one of the following main categories:

- ◆ **Pact Industrial Water Treatment Plants**
- ◆ **Pact Industrial Wastewater Treatment Plants**
- ◆ **Pact Municipal Water and Sewage Treatment Plants**
- ◆ **Pact Compact (Packaged) Water and Sewage Treatment Plants**
- ◆ **Pact Customized Compact Grey Water Treatment Plants**



**PACT INDUSTRIAL AND MUNICIPAL WATER AND
WASTE WATER TREATMENT EQUIPMENT & PLANTS**

Regional Offices

CALIFORNIA / USA | SHANGHAI / CHINA

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