

# POTABLE WATER TREATMENT STATION

## DESCRIPTION

**NEVER USED, NEVER ASSEMBLED** – This Potable Water Treatment System is skid mounted and permanently housed in (1) air conditioned 40' HC Container and its MCC/PLC Panel is permanently housed in an air conditioned 20' Container.

Main components of the system includes the following items  
**(See detailed equipment list attached for more details):**

- Well Water Tank
- Sand Filter
- Backwash Reject Tank
- Potable Water Tank
- Static Mixers
- Ca(CIO)2 Dosing Unit
- Flocculant Dosing Unit
- Chiller
- Heat Exchanger
- Carbon Filter
- Container buildings
- MCC / PLC Control System
- Multiple Pumps and Valves
- Polypropylene Piping, Fittings
- SS304 Piping and Fittings
- Platform, Handrails, Stairs and Ladders

I.D.	
OEM	PACT Environmental Tech. Co. Lt.
YOM	2013
Location	Indoor Warehouse Dunkirk, France
Condition	NEVER USED
Packaging	Container Mounted

	SPECIFICATIONS
Normal Flow Rate	4.5 m3/h
Design / Day	100 m3/h
Potable Water Distribution	16 / 20 m3/h
Design Temp	< 30 °
pH @ 25 °	6.5 – 8.5
Well Water Tank	50 m3
Motors	400 V / 50 Hz



### APPENDIXES ATTACHED

- APPENDIX A  
Detailed Equip. List
- APPENDIX B  
Equip. Data Sheets
- APPENDIX C  
Motor Data Sheets



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## DESCRIPTION – PROCESS OVERVIEW

The main process steps are:

Well water is pumped into a buffer storage tank (Well Water Tank), it is pumped by means of a water treatment feed pump and passes through the sand filter (media: silica + anthracite – 1m depth) to remove suspended particles. An injection of flocculant of 10- 15% (dosage of 30ppm) is added via flow meter with automatic adjustable stroke to improve flocculation of suspended solids.

Calcium Hypochlorite (delivered as a powder – Diluted in the storage tank) is injected in proportion to the filtrated water inlet flow rate to ensure a good disinfection in the Potable Water Tank. (> 10% efficient chlorine). The  $\text{Ca}(\text{ClO})_2$  injection, can also be replaced by  $\text{Na}(\text{ClO})_2$ .

Potable Water Tanks with connecting piping on the bottom are to receive and store the treated potable water. Potable water distribution is ensured by Potable Water Feed Pumps which have variable speed motors. A recycling line is provided, suitable to ensure minimum flow rate of the distribution pump. Downstream to the Potable Water Tanks, there is one activated carbon filter to eliminate the free chlorine dosed in excess in the Potable Water Tanks (contact time = 5 minutes). On a time basis (typically every 2 weeks), activated carbon filters are backwashed manually.

For distribution, Calcium Hypochlorite is injected at 0.3 ppm  $\text{Cl}_2$  to ensure protection of the network. This injection is monitored and controlled by a free  $\text{Cl}_2$  analyzer installed downstream from the activated carbon filter. A potable water-cooling system is included to cool and maintain the drinkable water at a temperature that is suitable for human consumption.

There is a backwash water tank for the Sand filter and activated carbon filter backwash water collection. This tank will be evacuated by means of Backwash Reject Water submersible pumps



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**APPENDIX A**  
**POTABLE WATER TREATMENT PLANT**  
**DETAILED EQUIPMENT LIST**



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**APPENDIX B**

**POTABLE WATER TREATMENT PLANT**

**EQUIPMENT DATA SHEETS**



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**APPENDIX C**

**POTABLE WATER TREATMENT PLANT**

**MOTOR DATA SHEETS**



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