

Irama Wastewater Treatment

For small & large communities



Irama
environmental
systems

www.irama.de

Special design for superior performance



*Reliable

*Economic

*User friendly



Tank Structure



Mechanical parts

What is the Irama wastewater package?

Irama wastewater treatment plants are reliable, easy to install and simple to maintain for all wastewater requirements. These highly functional plants can cater for ranges from 1 to 200 Cubic meters per day. The package is a modified Anaerobi-Anoxic-Oxic (A2O) plant suitable for heavy commercial applications. Modified A2O use a Three-stage process which treats wastewater in three distinct treatment zones known as .Anaerobic, Anoxic and Aeration reactor chambers

High Efficiency

>95% BOD₅
 >90% COD
 > 80% TN
 >85% TP

How a Irama modified A2O plant works?

Irama wastewater treatment plants use a simple, proven technology, to BOD₅, TN and TP removal: The A2/O process known as 3 Stage Phoredox (EPA, 2009), is based on the A/O (anaerobic/aerobic) process. The stages in the A2/O process are .anaerobic, anoxic and aerobic

Stage 1:

ABR (Anaerobic baffled reactor)

wastewater enters the primary chamber which acts both as a storage chamber to hold the wastewater until it is ready to be treated and anaerobic unit to Phosphorus removal. While wastewater being stored, the heavy solids settle to the bottom of the tank and the light particles, like fats and oils, float to the top of the water to create a scum and returned sludge will absorb excess Phosphorus.

Stage 2:

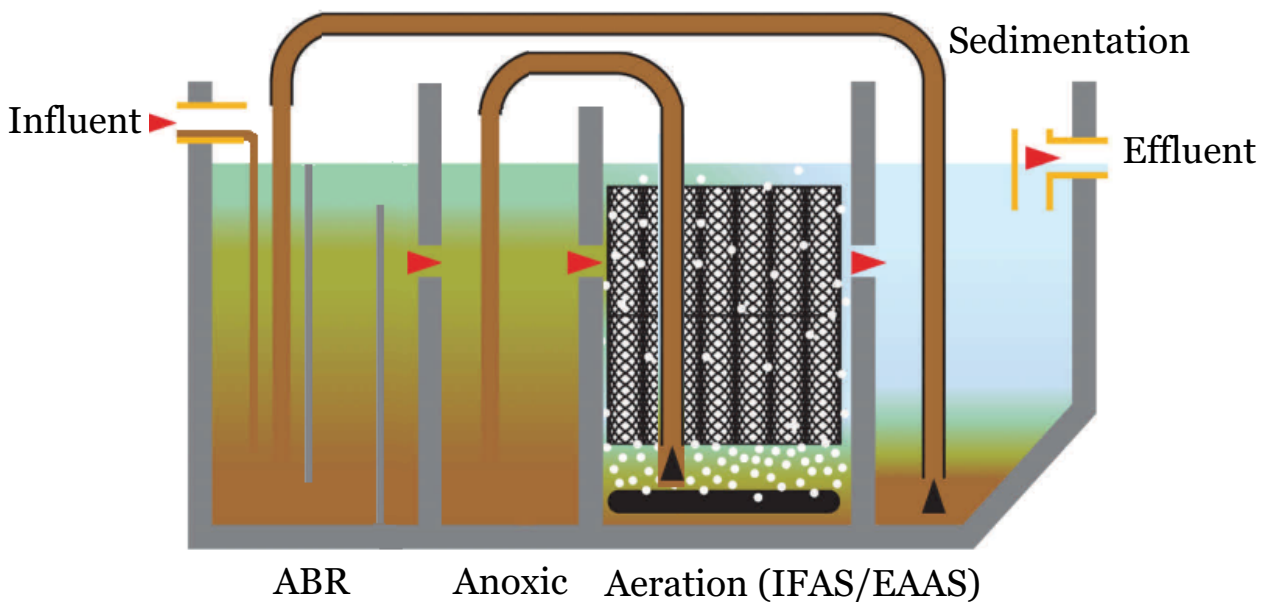
Anoxic

In the anoxic zone, nitrate and nitrit is removed through the denitrification process. While returned sludge from aerobic tank is mixed with wastewater an occure anoxic condition to nitrogen removal.

Stage 3:

Aeration (IFAS/EAAS)

in the reactor, naturally occurring bacteria which growth on fixed-film media, remove the pollutants from the wastewater. These bacteria are sustained with air delivered through a diffuser at the bottom of the tank.



Suitable for small & larg communities



These plants can install fully underground



These plants are suitable for installation at housing estates, camping sites, hotels etc., and have low maintenance and running costs.



minimal visual impact on the environment.



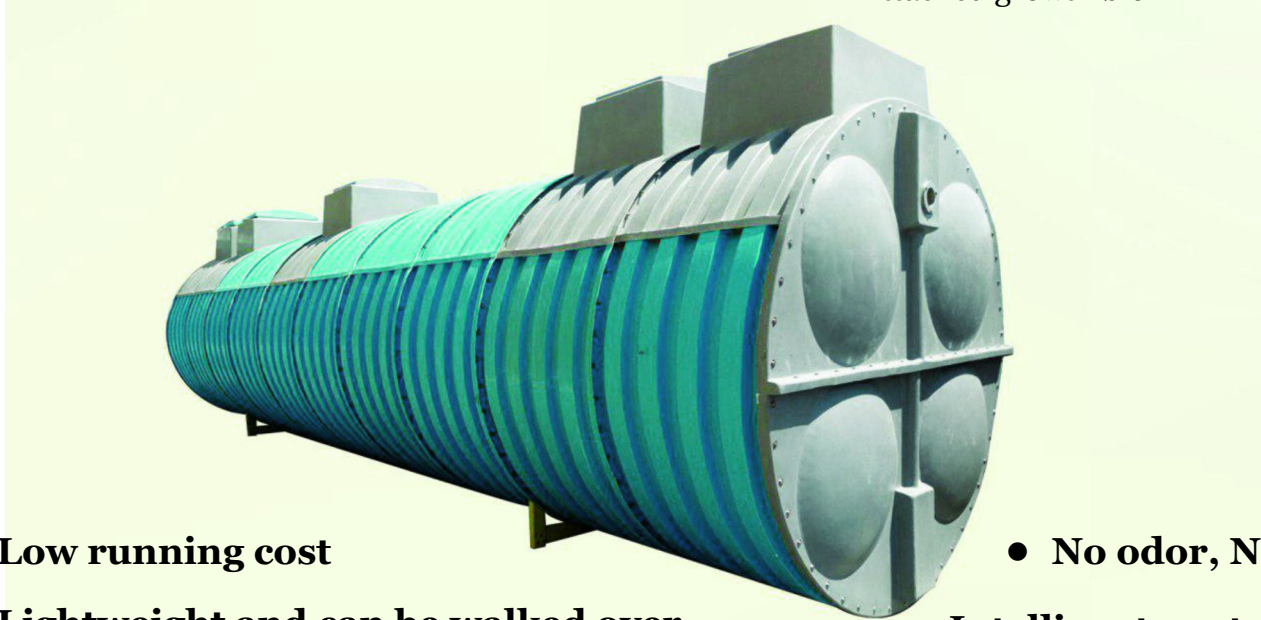
Excellent treatment results



Use treated wastewater to irrigation

Key features & benefits

- **Glass Reinforced Plastic (GRP) Structure**
 - lightweight
 - Easily installed
 - Chemical resistance
 - Mechanical and scratches resistance
 - Biological resistance
- **Modified biological method**
 - Improved process stability
 - High performance
 - Reduced Sludge Production
 - Phosphorous and Nitrogen removal
 - Attached growth biofilm



- **Low running cost**
- **Lightweight and can be walked over**
- **No odor, No aerosol**
- **Intelligent control system**

Irama P type packages

Model	Capacity m ³ /day	Dimension		Population Equivalent	Energy consumption
		Length(m)	Diameter (m)		
IWT02	2	2.2	1.8	12	200 W
IWT05	5	4.2	1.8	30	600 W
IWT10	10	5.4	2.4	65	1.2 KW
IWT20	20	8.4	2.4	130	2.2 KW
IWT50	50	12.4	2.4	320	4 KW
IWT100	100	16.4	2.4	650	7.5 KW

