NAIAD Hexa Series

Smart Water Platform

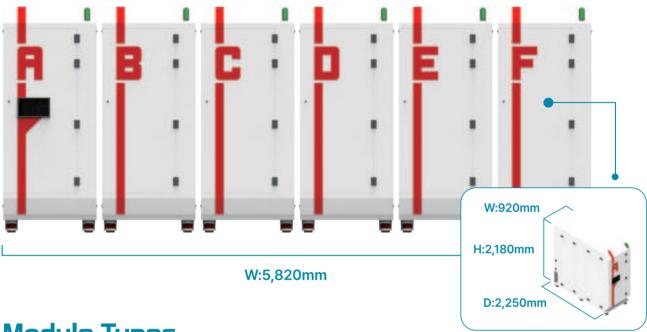
A sustainable water treatment platform consisting of six modules and autonomous operating system



NAIAD Hexa Series

Configuration and specs

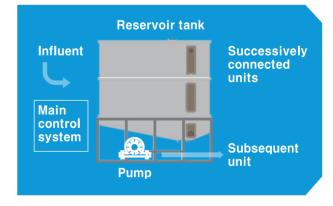
NAIAD Hexa Series consists of 6 modules and each module of the product can be added or omitted based on the characteristics of wastewater. The most suitable process is applied based on multiple water treatment test results.



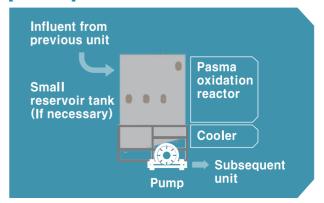
Module Types

No.	Water treatment functions(ID Name)	Released
Α	Main Control Unit and Reservoir Tank (MCU-RT)	0
В	Plasma Oxidation Unit (POU)	0
С	Electro-Coagulation Unit (ECU)	0
D	Ceramic Membrane Filtration Unit (CMFU)	0
E	Sedimentation and Dewatering Unit (SDWU)	0
F	Activated Carbon Unit (ACU)	0
G	Coagulation-Flocculation Unit (CFU) (Drinking Water Unit 1)	
Н	Sedimentation-Disinfection Unit (SDU) (Drinking Water Unit 2)	
I	Reverse Osmosis Unit (ROU) (Deionized-drinking Water Unit)	
J	Filtration Unit (FU)	
K	Anaerobic Bioreactor Unit (ABU)	
L	Advanced Oxidation Process Unit (AOPU)	

[Module A] Main Control Unit and Reservoir Tank



[Module B] Plasma Oxidation Unit



NAIAD Hexa Series

Operational steps

The Naiad Hexa Series goes through a carefully designed process from installation to use. Wastewater is analyzed in the laboratory to determine the treatment process. At the factory, the modules are assembled according to the analysis. The combined Naiad is transported to the site and installed. After more than a year of operational data has been collected, management is only a matter of monitoring from the office.

Site

Step

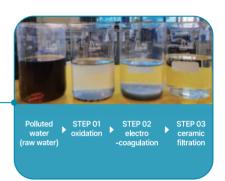
In Laboratory

01. Inspect Site

- · Visit to the site and examine the environment
- · Inspect wastewater and establish treatment goals

02. Analyze and Test in Lab •

- · Analyze wastewater and research on appropriate treatment methods
- · Test based on treatment method combinations



In Factory

03. Design Modules

- · Select and combine modules according to the treatment method
- · If pre-developed modules are not available, collaborate with HW companies to develop new modules

04. Assemble and Test in Factory

- \cdot Initial assembly of modules at the factory
- · Verify functionality through testing



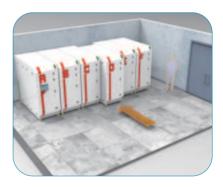
In Installation Site

05. Transport to the Site

- · Loading 6-unit modules into containers
- · Transport them via truck or ship

06. Install the Set and Test On-Site

- · The set is installed on-site within 3 days
- · Connect wastewater and test out



In Office

07. Carry out Operation and Monitor

- · Operate and analyze the treatment process for one year (covering all seasons)
- · Accumulate relevant data, monitoring from the office

08. Adjust Algorithm and Test Operation

- · Fine-tuning algorithms based on the collected data
- · Update subsequently with improved algorithms through learning at specified intervals



Based on AI · Bigdata

Unmanned Autonomous Operation

Feature 1

Integrated structure for autonomy



Remote Monitoring and Operation

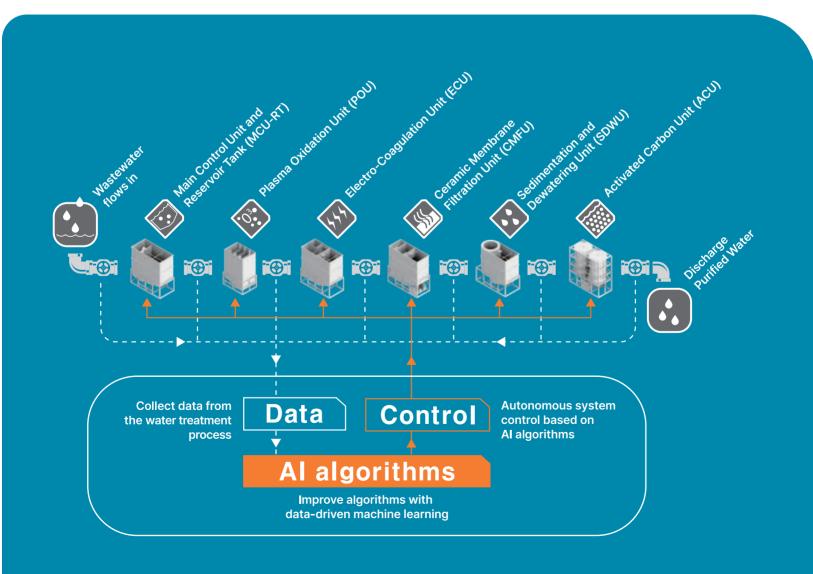


Optimized Power Control



Integrate the devices, controls, sensors, networks, and data processing required for water treatment into a single system.

Monitoring changes in quantity and quality remotely for operations Efficiently manage the power required for wastewater treatment and optimize power usage to contribute to carbon neutrality



Standard Size and Stainless Steel

Manufactured in Factory and On-site Installation

Feature

02

Factory-tested and transported installation



Since NAIAD is manufactured at the factory and then transported to the sites, it takes about 3 days for installation

Overcoming space constraints



Using standardized modules, it occupies minimal space and allows for on-site customization during installation

Appliance-like design



The modules are designed for easy use, similar to typical household appliances, and are made of highly durable stainless steel



Manufactured in Factory

The complete set of equipment is manufactured in the factory following standard module specifications



Transported in Containers

Loading the set of equipment into containers and transporting them to the site for setup



Installed On-Site

Equipment can be installed on-site within a short period of 3 days or less

Main Control Unit and Reservoir Tank (MCU-RT)



Data acquisition and control of an unattended system, and influent storage

Electro-Coagulation Unit (ECU)



Removal of suspended and dissolved constituents using coagulation via electrolysis of metals

Sedimentation and Dewatering Unit (SDWU)



Separation of treated from precipitated sludge and squeeze water out from the precipitates

Plasma Oxidation Unit (POU)



TOC (COD) removal from wastewater by plasma oxidation

Ceramic Membrane Filtration Unit (CMFU)



Removal of solidsuspended particles using high-performance ceramic membrane

Activated Carbon Unit (ACU)



Removal of dissolved and suspended constituents

Transformative and Adjustable

Module Typed Design

Feature 03

Integrated modules for the water treatment



Collaborate with hardware companies



Adapting Flexibly to any Changes



Purify water by connecting individual NAIAD modules, each with its own water treatment process, in stages

Design and build each NAIAD module in partnership with a hardware manufacturer that produces specific purpose water treatment devices.

In case of issues due to climate-induced quantity fluctuations or changes in raw water, it is possible to respond by simply replacing the modules

Why is **NAIAD Hexa Series?**

We are the guidance of the water

Naiad is a nymph in Greek mythology who guards the sources of water. We will do our best to enhance the value of water resources as how the nymphs protects them. By respecting the beauty of nature and aspires to a better water environment, we aim to provide clean water to future generations

We provide sustainable and effective water treatment solution

NAIAD Hexa Series is a sustainable and efficient water management platform, consisting 6 adjustable modules and autonomous operation based on big data.

This platform effectively removes pollutants and harmful substances, offering sustainable water management service for better water management.



Data Computing

NAIAD is designed to collect and process all the data needed for water treatment.



Reinforcement Learning

NAIAD standardizes systems to enable reinforcement learning



Automatic Advancement

NAIAD regularly improves its algorithms through reinforcement learning to continuously increase efficiency

We Create Services Operated by Data

10 years Established in 2014, BizData, boasting a decade of experience, was founded

with the aim of providing data-driven decision-making and autonomous

operations services

Technology Over 80 specialized employees from three dedicated research labs devel-

oped the technology for innovative product development

Partnerships We are collaborating with various partners to conceive and bring business

ideas, jointly developing and offering products

Water Al In particularly, after participating in the intelligent water treatment project of

the K-Water in 2019, we started to research and develop autonomous oper-

ation service for the smart water platform.

NAIAD History

2020

2022

2023

Ideation for developing intelligent water treatment systems



Design a water treatment system that can be applied to smart city projects



Expand the NAIAD platform by working with a variety of water treatment hardware partners



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