SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Anaerobic Water Treatment Pilot Plant – HydraNexis HNX 04

Category: Water Treatment Technology · **Order Code:** HNX 04 · **Country of Origin:** India

Product Overview

The Anaerobic Water Treatment Pilot Plant ( ) is a laboratory and pilot-scale system designed to demonstrate anaerobic degradation of organic pollutants in wastewater. Made by Scientico India, ISO 9001:2015 certified, and supplied with a calibration certificate and operation manual.

View this product online: https://scienticoindia.com/product/anaerobic-water-treatment-pilot-plant-hydranexis-hnx-04/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Component	Specification
Feed Tank	Material: Stainless Steel; Volume: 600 L
Anaerobic Digester (UASB)	Material: Stainless Steel; Volume: 200 L; Process: Anaerobic
Heating System	Type: Shell and Tube; Heated Medium: Thermal Oil; Control: Digital Temperature
Heater Rating	Temperature Range: 0–180 °C; Power: 6 kW
Feed & Recycle Pumps	Type: Screw; Material: Stainless Steel; Flow: 0–60 LPH
Compressor	Type: Double Acting Piston; Purpose: Agitation; Flow: 0–1200 LPH
Flowmeters (Liquid)	Quantity: 2; Range: 0–1 LPM (Feed and Recirculation)
Air Flowmeter	Quantity: 1; Range: 0–1 m³/h
Sensors	pH: 0–14; RH: -1500 to +1500 mV
Differential Pressure Sensor	Range: 0–2500 Pa
Measuring Ranges	Temperature: -100 to 400 °C; Pressure: 100 mWC
Control & Monitoring	Microprocessor-controlled pH and RH meters
Optional Instrumentation	Electronic flow transmitters and indicators
Software	HNX 04 DAQ Software (Optional), LABVIEW-based

Key Features

Key Features

- Demonstrates complete anaerobic water treatment using UASB reactor technology
- Controlled generation and separation of biogas during anaerobic digestion
- Stainless steel construction for durability and chemical compatibility
- Measurement and control of critical parameters such as pH, RH, temperature, and flow
- Sludge recirculation for maintaining stable biological activity
- Optional PID control and data acquisition for advanced process analysis

Applications

- Environmental and civil engineering laboratory experiments
- Anaerobic digestion and wastewater treatment studies
- Training on UASB reactor operation and design principles
- Research on biogas generation and anaerobic process optimization
- Pilot-scale evaluation of organic load and sludge loading effects
- Academic studies on biological water purification technology

Construction & System Design
The HydraNexis HNX 04 pilot plant is mounted on a stainless steel framework with castors, providing stability and ease of movement. A clearly displayed process flow diagram on the front panel supports instructional and operational clarity. All major process components, including the digester, tanks, pumps, and piping, are constructed from stainless steel to ensure long service life and safe operation. Integrated safety elements such as pressure control valves, differential pressure monitoring, and an emergency push button enhance operational reliability. The system reflects export-grade manufacturing standards suitable for laboratory and pilot installations.

Export & Supply Capability
SCIENTICO manufactures the Anaerobic Water Treatment Pilot Plant HydraNexis HNX 04 for supply to engineering institutions, research organizations, and water treatment training centers worldwide. The system is suitable for international shipment with standard export packaging, technical documentation, and instruction manuals. Optional instrumentation and software configurations can be provided based on project or curriculum requirements.

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q1. What process does the Anaerobic Water Treatment Pilot Plant demonstrate?
It demonstrates anaerobic biological treatment of wastewater using a stirred tank and UASB reactor, including biogas generation.

Q2. What type of biogas is produced in the system?
The biogas primarily consists of methane and carbon dioxide generated during anaerobic degradation of organic matter.

Q3. Which operating parameters can be monitored and controlled?
Key parameters include temperature, pH, redox potential (RH), flow rate, recycle ratio, and pressure within the digester.

Q4. What is the role of sludge recirculation in the process?
Sludge recirculation helps maintain a high concentration of active biomass, improving treatment stability and efficiency.

Q5. Is the HydraNexis HNX 04 suitable for export and international use?
Yes, the system is manufactured by SCIENTICO for export and is supplied with appropriate documentation and optional customization support.

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