



#startupindia



TM

# HN Technovations

Harnessing Nature Via Tech Innovations



Assam, India

# PORTABLE WATER PURIFICATION & ENERGY SOLUTIONS

We provide innovative portable water purification & energy solutions primarily for disaster-prone and underserved areas. Our patented range of solar-powered, and petrol pump-based systems transform flood, pond, lake, and river water into WHO-grade drinking water. Lightweight and efficient, our machines ensure safe water access and some machines also provide emergency power during emergencies and tough situations, fostering global resilience and sustainable development.

**SCIENTIFICALLY  
DEVELOPED AND TESTED**

- ✔ Modular based designs for quick setup
- ✔ Address global water challenges sustainably
- ✔ Provides emergency AC/DC & USB based power

Our Location

Dept. of Chemical & Polymer Engineering, Tripura University, Agartala, Tripura, India-799022



Our Website/Email

[www.hntechnovations.com](http://www.hntechnovations.com)  
[hntechnovations@gmail.com](mailto:hntechnovations@gmail.com)



Call Us

+91-9863519662  
+91-9954246498



# World Water Day

22nd March

## | VISION |

At HN Technovations LLP, we envision a world where every individual has access to safe, clean drinking water. Through our commitment to innovative, sustainable technologies and our dedication to social responsibility, we strive to revolutionize water purification solutions. Our goal is to empower communities, mitigate the impacts of natural disasters, and ensure a resilient and sustainable future for all.

## | ABOUT US |

We are primarily providing sustainable solutions to tackle water & energy crisis during floods and cyclones by providing patented technologies in the field of portable water purification & renewable energy-based machines. This can also be used by military and disaster management forces very effectively. In addition, we are in the process of innovating new products in the field of Commercial, Domestic, Industrial drinking water system as well as Scientific Lab Grade water purification systems.

**GET DUAL ADVANTAGE OF  
WATER PURIFIER + ELECTRICITY**



## **SOLAR HYBRID PORTABLE OUTDOOR SMART WATER FILTER SYSTEM CUM EMERGENCY POWER BOX**



**WORKS ON BOTH SOLAR/AC  
POWER/BATTERY POWER**

## **SPECIFICATIONS**

Treatable Water Source: Low Turbidity Underground Water/Flood Water/Pond Water/Lake Water/Rain Water etc.

Avg. Flow Rate: 1 Litre Per Minute

Weight: 12 Kg + Battery Weight/Type/Capacity

Water Suction Head: Upto 2.5 meters

Raw Water TDS: <2000 ppm, Raw Water Turbidity:< 50 NTU

Solar Panel Specification: 150W Flexible

Output Voltage: 300W AC (Sinewave)/5V USB

Comes with Digital Energy Meter, Flow Meter, Smart Controller with Manual/Auto TDS for Water Filter, Auto Flush & Filter Change Alarm/Timer

\*Can deliver up to 350 Litres of clean drinking water on full charge (Variable)

\*All specifications are under tested and controlled conditions and may vary with water quality & environmental conditions

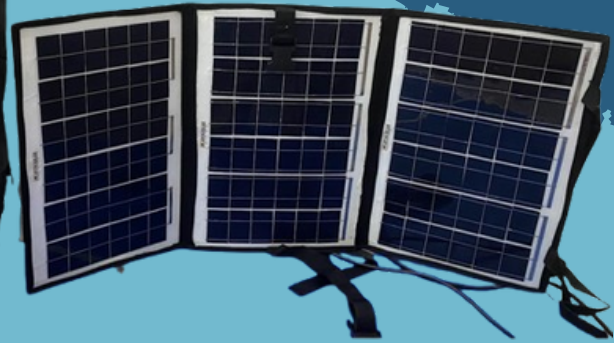
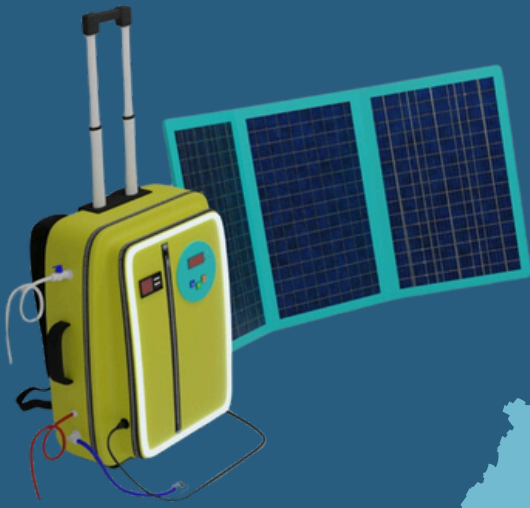
**INLINE  
TDS  
SENSOR**

**FILTER  
CHANGE  
ALARM**

**IP65  
ABS BOX**



**GET DUAL ADVANTAGE OF  
WATER PURIFIER + ELECTRICITY**



## **EMERGENCY BAG WATER PURIFIER CUM POWER BACKUP UNIT**



**WORKS ON BOTH SOLAR/AC  
POWER/BATTERY POWER**

## **SPECIFICATIONS**

Treatable Water Source: Low Turbidity Underground Water/Flood Water/Pond Water/Lake Water/Rain Water etc.

Avg. Flow Rate: Upto 2.2 Litres Per Minute

Weight: <10 Kg (250W Li-Ion Battery with BMS Safety)

Water Suction Head: Upto 2.5 meters

Raw Water TDS: <2000 ppm, Raw Water Turbidity:< 50 NTU

Solar Panel Specification: 50W Flexible

Output Voltage: 100W AC/5V USB

\*Comes with Battery Charge and Voltage Meter, Smart Controller with Manual/Auto TDS for Water Filter, Auto Flush & Filter Change Alarm/Timer

\*Can deliver up to 500 Litres of clean drinking water on full charge

\*All specifications are under tested and controlled conditions and may vary with water quality & environmental conditions

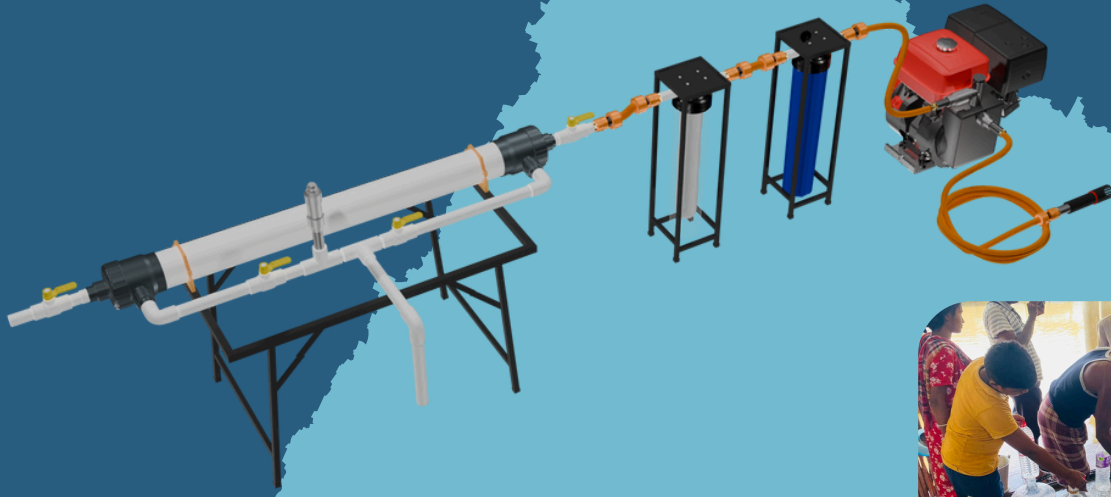
**INLINE  
TDS  
SENSOR**

**FILTER  
CHANGE  
ALARM**

**WATER-  
PROOF**



**WORKS JUST ON PETROL PUMP  
& QUICK FITS IN 5 MINS.**



## **PORTABLE PRE-FILTER AND DUAL- UF BASED WATER PURIFICATION SET (FOR SMALL COMMUNITY)**

**CLEAN POTABLE/DRINKING WATER\*  
UPTO 7000 LITRES PER DAY**

### **SPECIFICATIONS**

Treatable Water Source: Mid Turbidity Underground Water/Flood Water/Pond Water/Lake Water/Rain Water etc.

Avg. Flow Rate: Upto 10 Litres Per Minute

Weight: 35 Kg Modular

Water Suction Head: Upto 20 meters

Raw Water TDS: <500 ppm, Raw Water Turbidity:< 100 NTU

Water Pump Model: Honda 80 CC 1.5 kW Air Cooled 4 Stroke Engine

Water  
Test Kit  
Included

Flexible  
Table  
Mount

Chlorine  
Dosing  
Option

\*Ultrafiltration Membranes can't be used to remove ionic substances such as heavy metals, saline content, Fluorides etc.

\*For targeted removal, the initial 20" UF membrane jumbo filter needs to be replaced by appropriate ion exchange resin

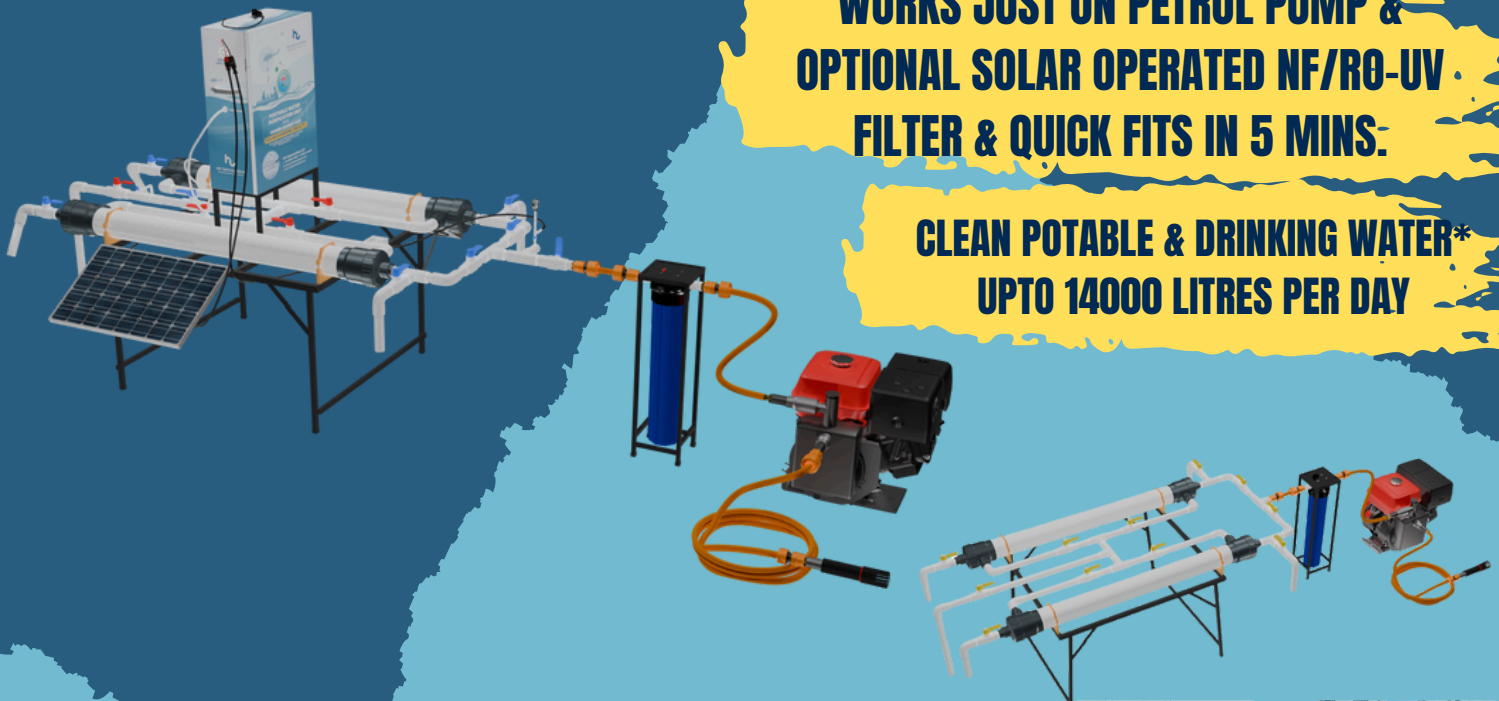
\*Comes with water testing kit

\*Recommended backwashing with clean water every 500-1000 Litres clean water delivered

\*All specifications are under tested and controlled conditions and may vary with water quality & environmental conditions

**WORKS JUST ON PETROL PUMP &  
OPTIONAL SOLAR OPERATED NF/RO-UV  
FILTER & QUICK FITS IN 5 MINS.**

**CLEAN POTABLE & DRINKING WATER\*  
UPTO 14000 LITRES PER DAY**



## **COMMUNITY LEVEL PORTABLE & MODULAR CUM HYBRID SURFACE/FLOOD WATER PURIFIER**



## **SPECIFICATIONS**

**INNOVATIVE USE OF ONE FILTER TO  
CLEAN OTHER ON SPOT**

Treatable Water Source: Mid Turbidity Underground Water/Flood Water/Pond Water/Lake Water/Rain Water etc.

Avg. Flow Rate: Upto 10 Litres Per Minute

Weight: 75 Kg Modular

Water Suction Head: Upto 20 meters

Raw Water TDS: <500 ppm, Raw Water Turbidity:< 100 NTU

Water Pump Model: Honda 80 CC 1.5 kW Air Cooled 4 Stroke Engine

Water  
Test Kit  
Included

Flexible  
Table  
Mount

Heptabore  
UF  
Membrane

\*Ultrafiltration Membranes can't be used to remove ionic substances such as heavy metals, saline content, Fluorides etc.

\*For ionic level removal of heavy metals/fluorides, etc., the mountable 50 LPH solar-operated NF/RO-UV system can be used

\*Comes with water testing kit

\*Recommended backwashing with clean water every 500-1000 Litres clean water delivered

\*All specifications are under tested and controlled conditions and may vary with water quality & environmental conditions



**WORKS BOTH ON SOLAR AND/OR  
DOMESTIC POWER WITH/WITHOUT  
BATTERY PACK**

**6-STAGE SMART UF/NF/RO-UV FILTER  
WITH MINERAL CARTRIDGE**



# PORTABLE WATER PURIFICATION UNIT WITH POWER BACKUP AND SOLAR CHARGING FACILITY (50 LPH SOLAR-OPERATED NF/RO/UF-UV SYSTEM)



## SPECIFICATIONS

**SET YOUR OWN MINERAL CONTENT  
DIGITALLY**

Treatable Water Source: Mid Turbidity Underground Water/Flood Water/Pond Water/Lake Water/Rain Water etc.

Avg. Flow Rate: Upto 1 Litre Per Minute

Weight: 15 Kg (With Battery and without Solar Panels)

Water Suction Head: Upto 2 meters

Raw Water TDS: <2000 ppm, Raw Water Turbidity:< 50 NTU

Water Pump: 300 GPD Self Priming

**PURE &  
HEALTHY  
WATER**

**EASY  
MAINTENANCE**

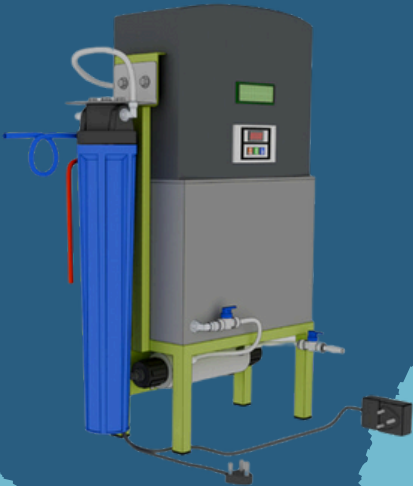
**BOX LOCK  
FEATURE &  
SMART  
SWITCH**

\*Comes with Solar Charge Controller, TDS Sensor, Smart Filter Controller with Auto TDS adjuster, Auto Flush & Filter Change Alarm/Timer

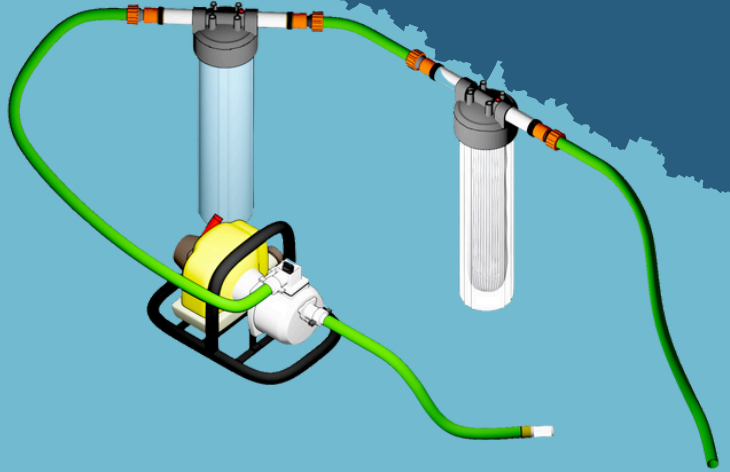
\*Can deliver up to 500 Litres of clean drinking water on full charge (If used on only battery)

\*All specifications are under tested and controlled conditions and may vary with water quality & environmental conditions

# OTHER PRODUCTS



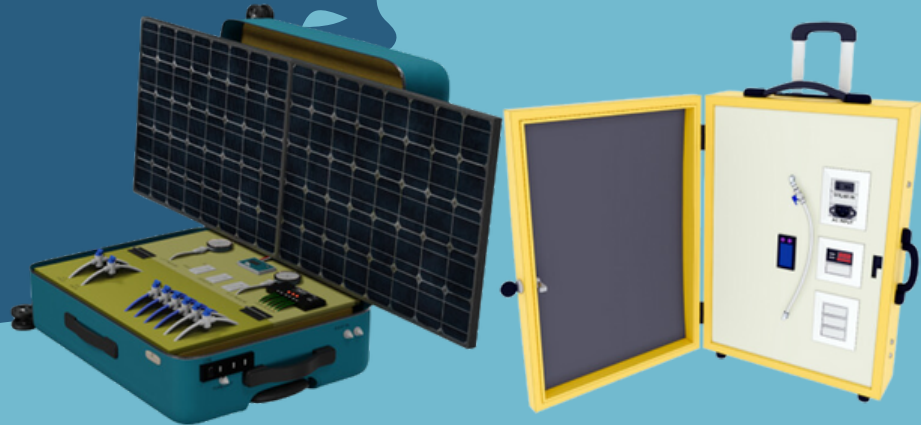
**DEMINERALIZED WATER MACHINE  
(DISTILLED WATER) FOR TYPE-2 WATER**



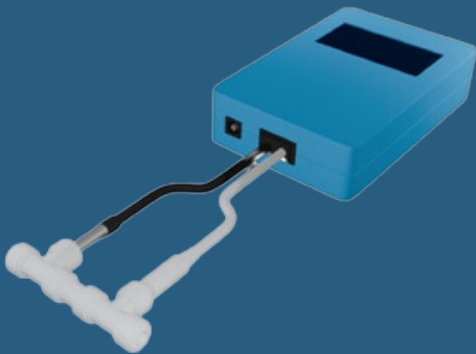
**20" PP PRE-FILTER & HOLLOW FIBRE UF  
BASED POTABLE/DRINKING WATER  
SYSTEM (PETROL PUMP OPERATED)**



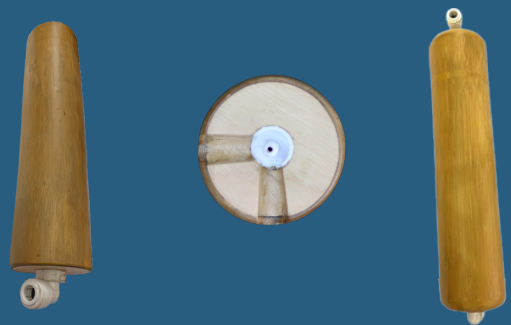
**DESALINATION BOTTLE**



**SUITCASE WATER PURIFIER  
WITH/WITHOUT MANUAL BACKWASH  
FEATURE (SOLAR/AC OPERATED)**



**IOT BASED TDS & TEMPERATURE  
SENSING SYSTEM**



**BAMBOO HOUSED WATER PURIFICATION  
MODULES (SEDIMENT/CARBON/UF)**



# INTELLECTUAL PROPERTIES

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**पेटेंट प्रमाण पत्र** | Patent Certificate  
 (पेटेंट दिवसों की सूची - 1) (List-1 of The Patents Act)

पेटेंट नं. / Patent No. : 438227  
 आवेदन नं. / Application No. : 201901051943  
 दाखल करने की तिथि / Date of Filing : 14/12/2019  
 पेटेंट / Patented : Tripura University (A Central University)

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **WATER PURIFICATION SYSTEM** नामक आविष्कार के लिए पेटेंट प्रदान किया गया है।  
 It is hereby certified that a patent has been granted to the patentee for an invention entitled **WATER PURIFICATION SYSTEM** as disclosed in the above mentioned application for the term of 20 years from the 14<sup>th</sup> day of December 2019 in accordance with the provisions of the Patents Act, 1970.

अधिकार दिनांक : 11/07/2023  
 Date of Grant : 11/07/2023

नोट : पेटेंट दिवसों की सूची - 1 के तहत, पेटेंट प्रमाण पत्र को 14 दिसंबर 2019 को जारी किया गया है।  
 Note : The term for renewal of this patent, if it is to be maintained, will fall / has fallen due on 14<sup>th</sup> day of December 2019 and on the same day in every year thereafter.

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**डिजाइन के पंजीकरण का प्रमाण पत्र** | Certificate of Registration of Design

डिजाइन नं. / Design No. : 413787-001  
 तिथि / Date : 17/04/2024  
 पारस्परिक तिथि / Reciprocity Date :  
 देश / Country :

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **PORTABLE WATER PURIFIER WITH USB CHARGING AND LIGHTING FACILITY** के लिए पेटेंट प्रदान किया गया है।  
 Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **PORTABLE WATER PURIFIER WITH USB CHARGING AND LIGHTING FACILITY** in the name of 1.Hn. Technovations Lip 2, Harjeet Nath.

प्रमाणित तिथि, 2000 में डिजाइन प्रमाण, 2001 के प्रावधानों के अधीन है।  
 In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

अधिकार दिनांक : 16/08/2024  
 Date of Grant : 16/08/2024

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**डिजाइन के पंजीकरण का प्रमाण पत्र** | Certificate of Registration of Design

डिजाइन नं. / Design No. : 417484-001  
 तिथि / Date : 20/05/2024  
 पारस्परिक तिथि / Reciprocity Date :  
 देश / Country :

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **BAMBOO HOUSED SEDIMENT FILTER MODULE FOR WATER TREATMENT** के लिए पेटेंट प्रदान किया गया है।  
 Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **BAMBOO HOUSED SEDIMENT FILTER MODULE FOR WATER TREATMENT** in the name of 1.Harjeet Nath 2, Ashwinay Kant.

प्रमाणित तिथि, 2000 में डिजाइन प्रमाण, 2001 के प्रावधानों के अधीन है।  
 In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

अधिकार दिनांक : 28/07/2024  
 Date of Grant : 28/07/2024

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**डिजाइन के पंजीकरण का प्रमाण पत्र** | Certificate of Registration of Design

डिजाइन नं. / Design No. : 415468-001  
 तिथि / Date : 01/05/2024  
 पारस्परिक तिथि / Reciprocity Date :  
 देश / Country :

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **DESALINATION CUM WATER HEATING BOTTLE** के लिए पेटेंट प्रदान किया गया है।  
 Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-03 in respect of the application of such design to **DESALINATION CUM WATER HEATING BOTTLE** in the name of Harjeet Nath.

प्रमाणित तिथि, 2000 में डिजाइन प्रमाण, 2001 के प्रावधानों के अधीन है।  
 In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

अधिकार दिनांक : 19/07/2024  
 Date of Grant : 19/07/2024

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**डिजाइन के पंजीकरण का प्रमाण पत्र** | Certificate of Registration of Design

डिजाइन नं. / Design No. : 411815-001  
 तिथि / Date : 25/03/2024  
 पारस्परिक तिथि / Reciprocity Date :  
 देश / Country :

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **JOT BASED ONLINE SMART WATER TDS AND TEMPERATURE MONITORING AND REPORTING DEVICE** के लिए पेटेंट प्रदान किया गया है।  
 Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-04 in respect of the application of such design to **JOT BASED ONLINE SMART WATER TDS AND TEMPERATURE MONITORING AND REPORTING DEVICE** in the name of 1.Harjeet Nath 2, Alak Roy 3.Purnendu Mandal.

प्रमाणित तिथि, 2000 में डिजाइन प्रमाण, 2001 के प्रावधानों के अधीन है।  
 In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

अधिकार दिनांक : 19/08/2024  
 Date of Grant : 19/08/2024

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**डिजाइन के पंजीकरण का प्रमाण पत्र** | Certificate of Registration of Design

डिजाइन नं. / Design No. : 419684-001  
 तिथि / Date : 11/06/2024  
 पारस्परिक तिथि / Reciprocity Date :  
 देश / Country :

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **DRINKING WATER PURIFICATION SYSTEM** के लिए पेटेंट प्रदान किया गया है।  
 Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **DRINKING WATER PURIFICATION SYSTEM** in the name of 1.Harjeet Nath 2, Hn Technovations Lip 2, Alak Roy 3.Purnendu Mandal.

प्रमाणित तिथि, 2000 में डिजाइन प्रमाण, 2001 के प्रावधानों के अधीन है।  
 In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

अधिकार दिनांक : 22/10/2024  
 Date of Grant : 22/10/2024

**पेटेंट कार्यालय, भारत सरकार** The Patent Office, Government of India  
**डिजाइन के पंजीकरण का प्रमाण पत्र** | Certificate of Registration of Design

डिजाइन नं. / Design No. : 403130-001  
 तिथि / Date : 26/12/2023  
 पारस्परिक तिथि / Reciprocity Date :  
 देश / Country :

प्रमाणित किया गया है कि निम्नलिखित में वर्णित डिजाइन को **EMERGENCY BAG WATER PURIFIER CUM POWER BACKUP UNIT (SET)** के लिए पेटेंट प्रदान किया गया है।  
 Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **EMERGENCY BAG WATER PURIFIER CUM POWER BACKUP UNIT (SET)** in the name of 1.Harjeet Nath 2, Sabita Rani Paul.

प्रमाणित तिथि, 2000 में डिजाइन प्रमाण, 2001 के प्रावधानों के अधीन है।  
 In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

अधिकार दिनांक : 21/07/2024  
 Date of Grant : 21/07/2024



**IP'S FILED 21  
 GRANTED: 7+1 (NEW)**

# TEAM



**PROF. N.V.C. MENON**

FOUNDER MEMBER, NATIONAL DISASTER MANAGEMENT AUTHORITY  
GOVT. OF INDIA



**HARJEET NATH**

FOUNDER &  
ASSISTANT PROFESSOR, TRIPURA UNIVERSITY  
(A CENTRAL UNIVERSITY), INDIA



**SABITA RANI PAUL**

CO-FOUNDER

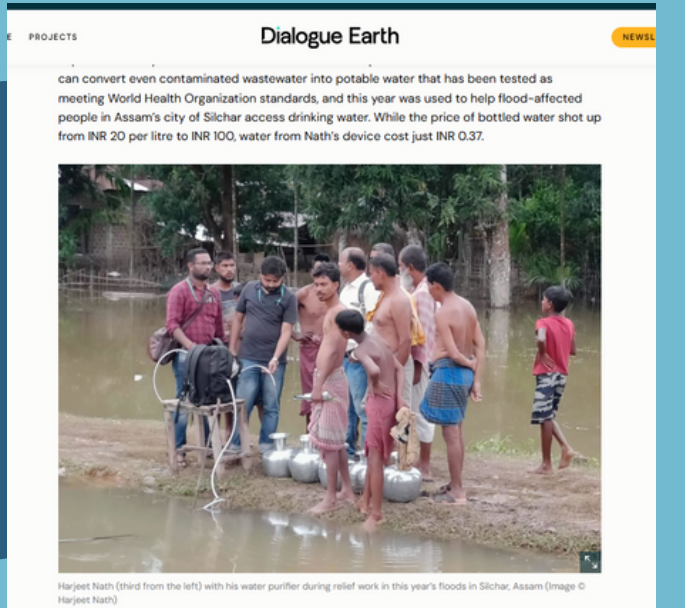
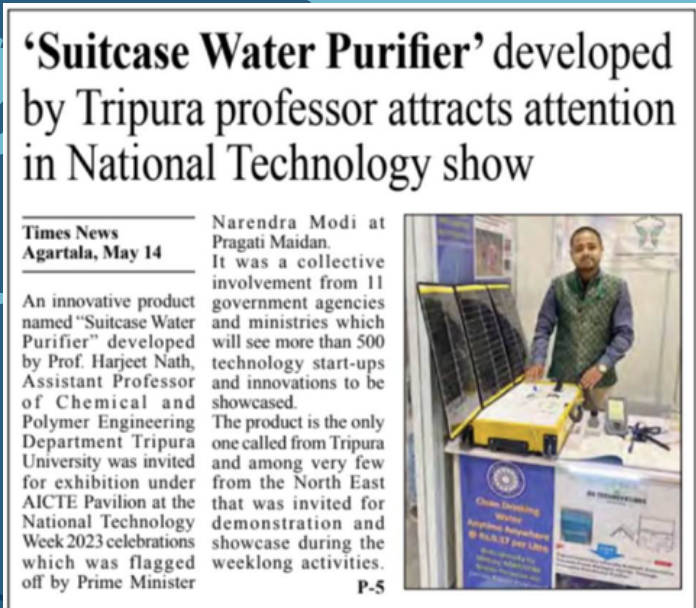


**SOURAB BAIDYA**

OPERATIONS MANAGER



# PICTURE GALLERY





## INNOVATIONS FOR THE SOCIETY



**HN TECHNOVATIONS LLP  
ACADEMIC BUILDING NO. 5,  
DEPARTMENT OF CHEMICAL & POLYMER ENGINEERING,  
TRIPURA UNIVERSITY (A CENTRAL UNIVERSITY), AGARTALA, TRIPURA WEST, INDIA-799022**

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