Water ATM: The Innovated Way to Provide Pure and Hygienic Water to Public

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ABSTRACT

Water ATM is the most popular product that is used to serve public. We can provide the top grade pure water in cheap amount to public. With the innovations in this field we can touch the areas of rural also to prevent the health issues arise by impure water. In this paper, we are explaining the different variants of machines with their working. And also show how beneficiary it is for the public.

This product is not so new but the technology which we are using is completely new, we are using NFC cards. And all data is synch by the internet our aim is to stop wasting of water and preventing the use of plastic. Also we are providing the RO treat water in rural areas, this will make them hygienic.

Keywords: NFC, Water ATM, RO, Hygiene, Pure water

I.INTRODUCTION:

Club first is a company that always believes in doing new innovations to serve public. It is named in Guinness Book of World Record also in the field of Robotics. Along with this, Club first is also the manufacturer of Water ATM.

Water is the basic need of living beings, and drinking pure water is right of human. Still in most of the rural and some of the urban areas, the impure and high TDS water is available that is not good for health. In urban areas, we can afford RO and its maintenance also but in most of the rural areas it is not possible. Even they are not aware also with the future happening with their health by drinking high TDS water.

Our company works on manufacturing and installing the RO plants to provide pure and tested RO water in very cheap rates. So many other companies are also their doing work in the same field, but the thing make our company different from others is the automation and innovation.

2.1. Objective:

There are so many other water plants also providing pure water to public that are based on both coin and card. They are using RFID card for water dispensing. Our objective is to make our each and every plant accessible to each and every one as like petrol pump. If one is travelling and want to fill petrol in vehicle, they can refill it by any petrol pump come in between. As like that we want everyone can carry prepaid rechargeable card with them and if to drink water they just visit to the plant come in between and can refill water bottle with pure water that is cost very low.

And also aim to provide hygiene and healthy life by saying NO to plastic water bottle. This is on the concept of bringing of our own bottle.

2.2. Nobel Business Model:

It is a great business model, as if you are paying for something it is quite sure that the thing is of good quality to have. People usually prefer packed water bottle in place of free drinking place because they believe on quality of that packed water for which they are paying.

Around 150 RO plants are there in rural areas of Haryana and Rajasthan. And now we start installing compact RO plant in urban areas also. In these areas the users are having prepaid rechargeable cards to dispense water anytime (service is for 24x7).

Fig. 1: Fully Automated RO Plant

III.TECHNOLOGY USED:

To fulfill our objective we have to focus on two things:

- Automated plants: Some of the areas are there where it is very difficult to visit again and again, for those areas, our plants are fully automated. The motors are automatically get start and stop at the time of getting water tank empty and full respectively. Also the GPS system in it throws the message to the registered mobile about the complete detail of card read per day, recharge per day and liter dispense per day.
- NFC card: NFC is the Near Field Communication card that works on bit coin concept. To allow the cards read by any of our plant, NFC is the most appropriate choice. With RFID one can only dispense water from the plant they registered.

Fig. 2: NFC card

IV. VARIANTS OF WATER ATMS:

4.1. Water ADU Storage:

Fig. 3: Automatic Dispensing Unit

- 1000/2000 ltr. Storage
- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled
- Application: For remote area.

4.2. Water ADU Remote area Solar:

Fig. 4: Solar Operated Water ADU

- 5000 ltr. Storage
- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled

- Solar powered
- Application: For remote area.

4.3. Water ADU plant side:

Fig. 5: ADU System at Plant Side

- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled
- Solar powered
- Motor based
- Flow based
- Application: For remote area.

4.4. Water Vending Machine (Italian Chrome design):

Fig. 6: Compact water vending machine (at Sindhi camp bus stand)

- 500 ltr. Storage
- 500 LPH RO/UV
- 200 Ltr. Chiller
- Water ozonation
- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled
- Application: Bus stands, Railway stations, public areas

4.5. Mobile Water ATM:

Fig. 7: Mobile Water Dispenser

- 2000/3000 Ltr. Storage
- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled
- Solar dispensing
- Application: For commercial water supply

4.6. RO Plant:

Fig. 8: RO Plant

- 10000 Ltr. Storage
- 1000 LPH RO/UV
- 200 Ltr. Chiller
- Water ozonation
- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled
- Application: For community water supply

V. FIRST HIGH CAPACITY COMPACT WATER ATM:

In urban areas where we cannot install the complete RO plants because of lack of space, our company designed a compact RO plant with high capacity storage. We had already installed three machines in the urban areas of Jaipur.

It seems like Water vending machine (Italian Chrome).

- 3000 Ltr. Storage
- 1500 LPH RO/UV
- 200 Ltr. Chiller
- NFC card and coin based module
- ERP enabled
- GSM enabled
- GPS enabled

VI. CONCLUSION

These water ATMs facilitate the humans with pure drinking water which will reduce the health issues like stone in kidney. It is easy for everyone to use it any time. The NFC cards used in plants of Club First will help user to access it on any of the Club First's plant. Machine is automatic so that it is running properly in rural areas also. We designed different variants in water ATMs to cover large area according to application area. This theme will also reduce use of Plastic water bottle that is unhygienic of health and environment.