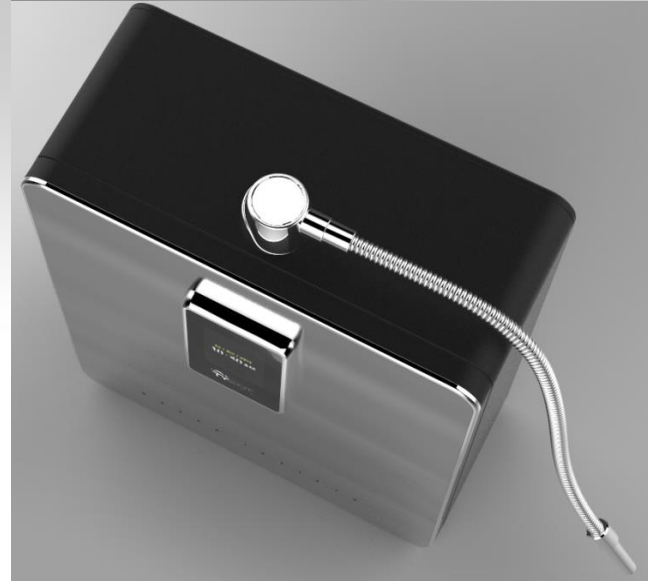




W A T E R I O N I Z E R

# Design 01 SUS



## 02 Intellectual Property Office - Design Registration

**디자인등록증**  
CERTIFICATE OF DESIGN REGISTRATION



**등록** 제 30-0780466 호  
Registration Number

**출원번호** 제 30-2014-0048169 호  
Application Number

**출원일** 2014년 10월 07일  
Filing Date

**등록일** 2015년 01월 13일  
Registration Date

**등록의 구분** 심사 등록  
Type of Registration (EXAMINED REGISTRATION)

**물품류 Class**  
제23류  
디자인의 대상이 되는 물품 Product  
이온수기

디자인권자 Owner  
주식회사 태영이엔티(184511-0\*\*\*\*\*)  
경남 양산시 웅상대로 908, (평산동)

위의 디자인은 「디자인보호법」에 따라 디자인등록원부에 등록되었음을 증명합니다.  
This is to certify that, in accordance with the Design Protection Act, a design has been registered at the Korean Intellectual Property Office.

2015년 01월 13일

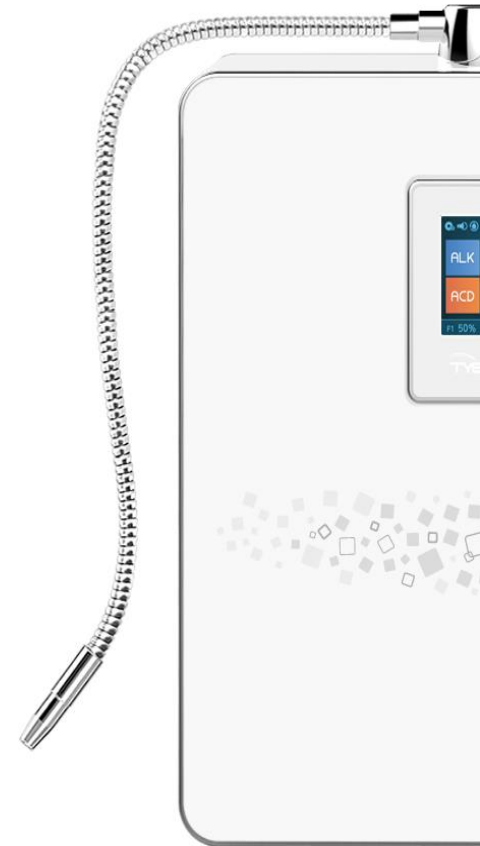
**특허청장**  
COMMISSIONER,  
KOREAN INTELLECTUAL PROPERTY OFFICE





## 03 Product Specification

	Model	TY20-TL SERIES	
Exterior of Product	Dimension	11.8(W) x 5.3(D) x 13.9(H) inches	
	Weight	10.8 Lbs	
Outflow method	water outflow	2L /min	
	pH levels	4 Alkaline, 1 Neutral, 3 Acidic, Turbo	
Display and Touch pad	Operation type	Touch screen	
	Display	TFT-LCD	
Power	Power Supply	SMPS	
Structure of Electrolyzer	Water Cell Plate Materials	Platinum and Titanium	
	Electrolytic Cell Quantity of Poles	7 / 9 / 11 / 13	
Filters Configuration	Filter	2 filter system	
Function	Voice announcement	●	Voice ON/OFF ●
	Automatic / Manual Cleaning)	●	Automatic Stop Function (15 min.) ●
Setting	Temperature sensor	●	Power saving function ●
	Filter Usage Indication	●	Backlight color ●
	Adjustable pH	●	Voice volume control ●
	Time Setting	●	Filter reset ●





# 04 Standard for premium water ionizer



### TFT LCD Screen with a Clear Picture Tone

A 262,000 Color Touch LCD Display provides Diverse information in true vivid colors.



### Wall-mounted type

Wall-mounted type for making better use of a space



### Comfortable newness

It offers familiar product usage environment like using a smartphone.



### 46cm flexible water outlet tube.

Water can be generated to the desired angle and direction



### Simple Filter Replacement

Women also can replace the filter easily.



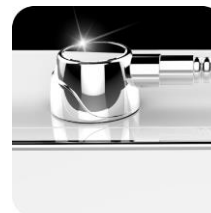
### MP3 Sound Quality with Guided Support

Clear voice announcement



### Open-close type door for filter replacement

No need to move the product of replacing the filter.



### Chrome decorative point Modern and stylish design

Stylish design with chrome decoration and soft round square shapes.

## 05 Product Feature- TFT LCD



### **Touch LCD Screen with a Clear Picture Tone**

A 262,000 Color Touch LCD Display provides diverse information in true vivid colors for user convenience..

### **The Industry's First Full Touch Screen Panel**

The Full Touch Screen Panel System automatically activates the unit's operations through a simple touch to the desired icon displayed on the screen

### **GUI [Graphical User Interface]**

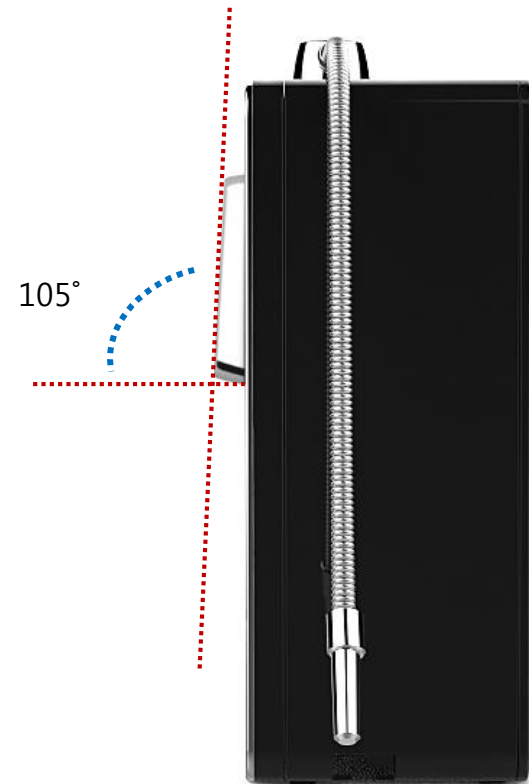
A Graphical User Interface is designed specifically for ease of use and operation. Communication between the user and ionizer has never been this simple!

## 05 Product Feature- Comfortable screen angle

Designed of optimal control panel for comfortable usage.

Best angles for touching the screen which is considered comfortable usage and eyeline.

The angle of touch screen panel is designed to facilitate user's gaze angle and touch operation.





## 05 Product Features – Operation

Accustomed way of use like a smartphone

**Best usage environment beyond the existing water ionizer.**  
It offers a familiar usage environment which users can recognize easily.

Display line of the set status

Functional water operation

Display line of filter usage



### *Icon : description*

	Set up	<b>ALK</b>	Alkaline water
	Voice on	<b>ACD</b>	Acidic water
	Voice off	<b>H<sub>2</sub>O</b>	Purified water
	Cleaning	<b>TURBO</b>	Turbo water
	Eco mode on	<b>F1</b>	Filter 1 usage
	Eco mode off	<b>F2</b>	Filter 2 usage



# 05 Product Features – Operation

Accustomed way of use like a smartphone



### Icon : description

ALK1	Alkaline level 1
ALK2	Alkaline level 2
ALK3	Alkaline level 3
ALK4	Alkaline level 4

ACD1	Acidic level 1
ACD2	Acidic level 2
ACD3	Acidic level 3
Home icon	Home button



# 05 Product Features

## Eco mode & Time mode



### Earth-Friendly Technology when in ECO Mode

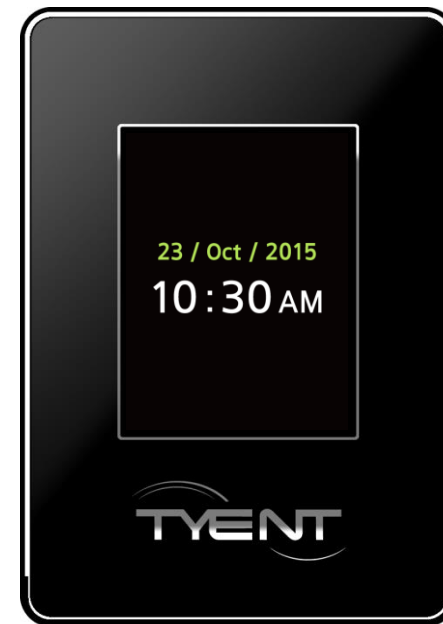
When setting the eco-mode, the LCD backlight will be turned off automatically during periods of non-use and the Time function is displayed



After 10 min  
unused



Switch into  
Time mode



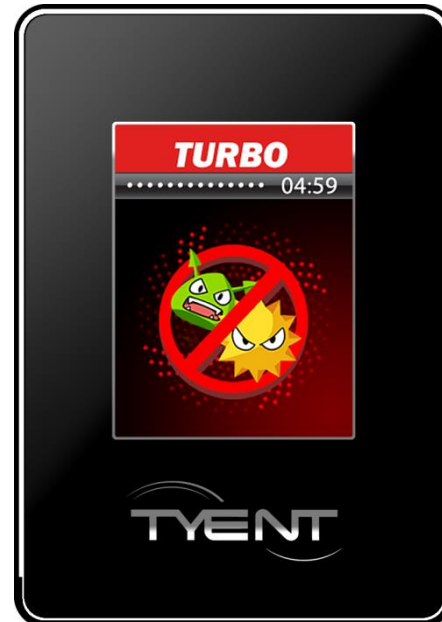
# 05 Product Features

## Strong TURBO functional water- Natural cleaning, Generation of sterilizing water



It generates sterilizing and cleaning water by electrolysis a pure water..  
 Turbo strong Alkaline water : pH 11 ~ 12  
 Turbo strong Acidic water: pH 3.5 ~ 2.5

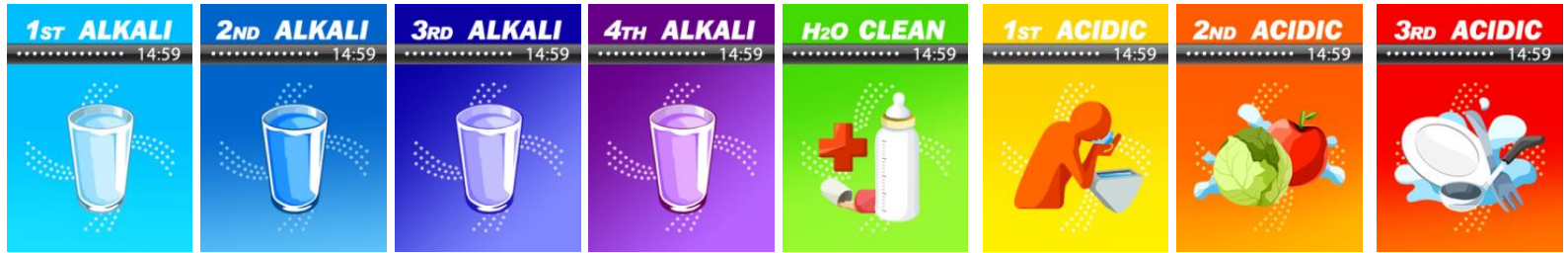
**\*The waters produced in TURBO mode are not intended for drinking.**





# 05 Product Features

## Light and Screen Indicators for Water Discharge Detection



Alkaline 1

Alkaline 2

Alkaline 3

Alkaline 4

Neutral

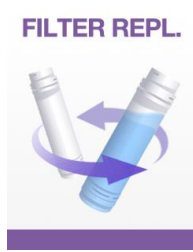
Acidic 1

Acidic 2

Acidic 3



Turbo



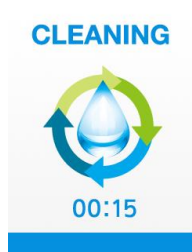
Notice for Filter change



lack of waterflow



Hot water inflow



Cleaning

## 05 Product Features

### Filter Usage Indication and Replacement Time Guide



#### Filter usage memory function

It can be memorized the exact rate of flow and usage time via filter memory function of flow sensor.

#### Filter Usage Indication and Replacement Time Guide

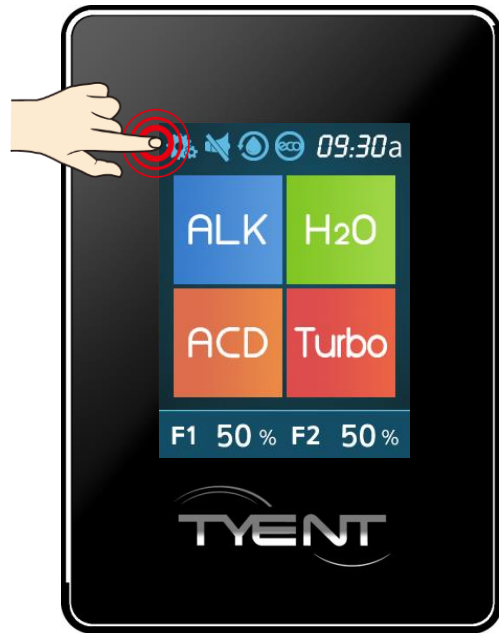
Level of filter usage can be identified through the LCD Screen on a real time basis. The recommended replacement time is automatically displayed on the screen with a voice guide.

#### Super Simple Filter Replacement System

A simple filter replacement system along with one-touch Filter Usage Initialization Setting System makes filter management easy for any one.



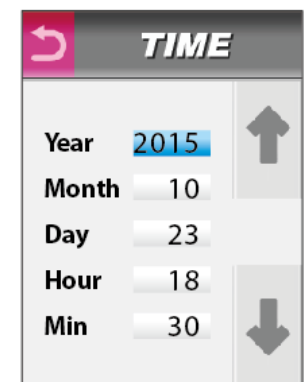
## 05 Product Features– System setup mode



### Convenience of Operating Condition Setting System

Easy Setting System familiar to common users is employed, allowing the convenience of setting or canceling the desired through the LCD Screen.

- pH Control Function
- Volume Level Adjustment
- Setting the TIME





## 05 Product Features– Convenient function

### One touch type for water outflow / stop



#### Electrical auto-water outflow control system

It can be controlled water outflow / stop by adapting to electronic solenoid valve .

#### FULL TOUCH SCREEN

Simply pressing the touch the screen allows you to start and stop the flow of functional water.

### Voice announcement



#### Voice announcement.

Functions under operation can be further identified by the top quality voice guided system Even though the voice function is turned off , the voice announcement will work when it requires user's attention,



#### Voice on/off and volume level control function

Voice announcement can be turned on or off according to user's choice.

The user can adjust the desired volume level





## 05 Product Features – Safety function

### Cleaning mode for Electrolyzer protection



#### Automatic and/or manual cleaning mode

The interior of the Electrolysis Tank is automatically cleaned on a regular basis, ensuring stable electrolysis operating conditions. Also user may manually clean unit whenever desired

### Self-diagnosis safety functions



#### Automatic Stop Function.

Water outflow will stop to prevent overflow or flooding. there is no need to wait if the unit automatically shuts off. You can resume its use immediately



#### Temperature sensor.

This unit is equipped with a temperature sensor which prevents the accidental inflow of hot water



#### Sensing function of supplied raw water.

The outflow of functional water stops automatically when raw water is not supplied, preventing the electrolytic cell and power supply unit from being damaged due to current overflow, water from being wasted and accidental water leaks

## 05 Product Features - Power supply

### SMPS power supply

#### SMPS type power supply (Registered Patent No. 10-0714055)

By applying the Switching Mode Power Supply (SMPS) method, the AC Line frequency (50Hz~60Hz) is converted into DC, changing it into a high frequency for use.

- **Changes in the output voltage in correlation to changes in the input power**  
Because the input exchange voltage is changed into a high dc voltage and controlled at a high-frequency, no changes occur in the output voltage.
- **Stable power supply**  
The supply of electrical power remains consistent even during continual use, thus maintaining optimal performance. .
- **Electrical safety**  
In the event that the product malfunctions due to leakage or short-circuiting that could potentially lead to the flow of over-current or over-voltage, the SMPS to prevent the flow currents or voltage above a certain determined level automatically blocks the supply of electricity from reaching the internals of the product..
- **Economic Effects**



## 05 Product Features - Electrolysis

### ROUND MESH Electrolyzer

Electrolyzer is most important part in water ionizer.  
The difference of the surface treatment determines the electrolysis efficiency.

A platinum coated titanium mesh covers

- Round-edge type for considering the characteristics of the electricity

Prevention of gas layer adhesion due to high-efficiency electrolysis performance to the entire electrode plate

- Broad surface area

- Coated products have inconsistent surfaces, making its actual surface area broader than that of electroplated products.

- High-efficiency electrolysis

The use of low voltage enables high-efficiency electrolysis performance

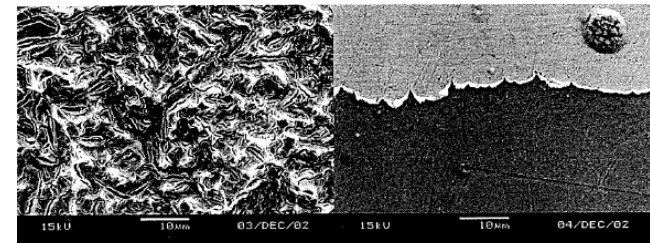
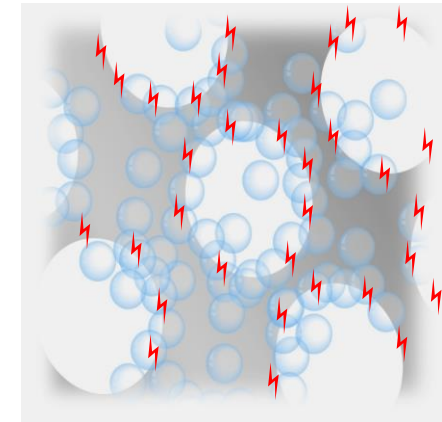
**Dualization of water inlet in electrolyzer**

Prevention of internal pressure in electrolyzer and improvement of electrolysis effectiveness.

Stable water outflow for alkaline water and acid water.

**Thread Mounted Types**

Improvement of the precision between electrode and membrane structure.



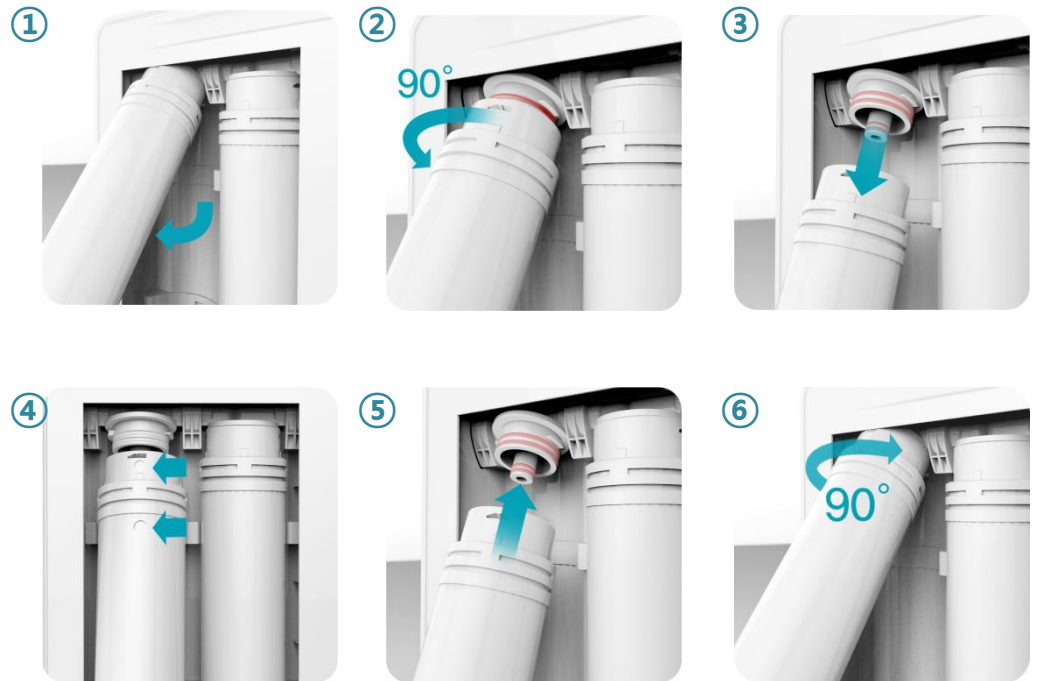
Platinum Coated Ti



## 05 Product Features - Structure

### Open and close type door & simple filter replacement system

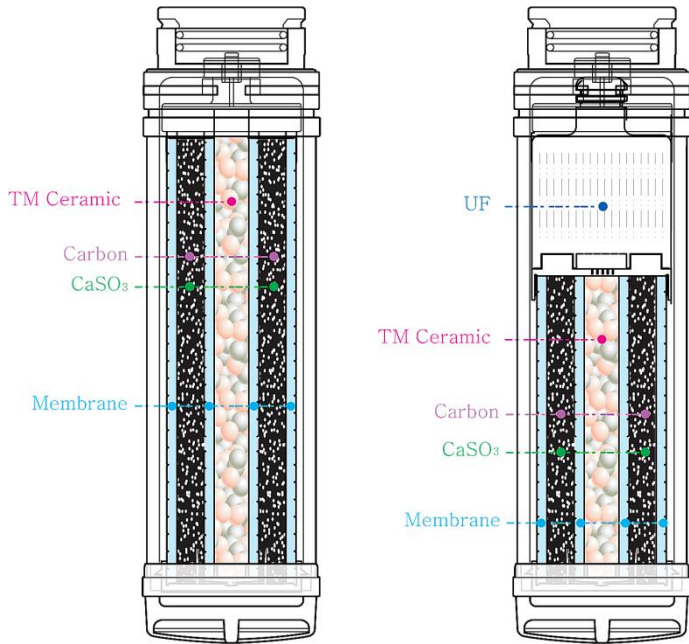
A simple filter replacement system along with one-touch Filter Usage Initialization Setting System makes filter management easy for any one.





# 05 Product Features – Filter

## FILTER SYSTEM



DM TYENT 1st filter      DM TYENT Ultra Filtration

### Excellent filtration System

As membrane Multilayer filtration system, 0.5~5 micrometer artificial film filters contaminated materials including ordinary bacteria while maintaining essential minerals in the water. Especially, Depth filtration system by multiple media filtration makes the filter lifetime longer and filtration function better.

### Multi-function

Membrane filter, activated carbon and functional ceramics are combined to perform multiple functions

### NO binder! 100% carbon utilization

No use synthetic resins binder to make block, so injected carbon is 100% utilized.

### Excellent water flow system

It can be maintain rich water discharge capacity due to decreasing the reduction of water discharge capacity appearing in existing block type.

### Excellent adsorption

Removes remnant chlorine and harmful chemical substances through an activation-absorption method using special GAC.

### Prevention of carbon separation

Prevention of the phenomenon of Carbon secession according to decrease coherence of binder which is one of the weaknesses in existing block by applying a M/B Filter Core.



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