

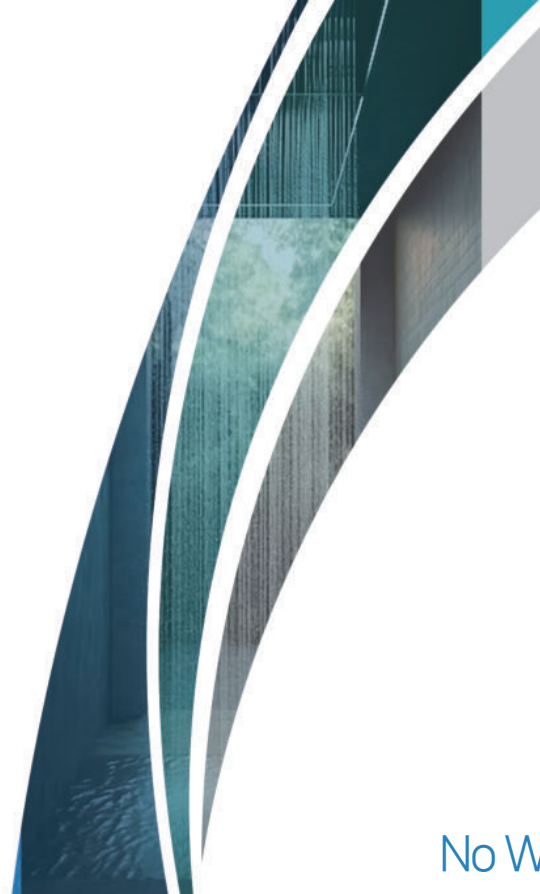
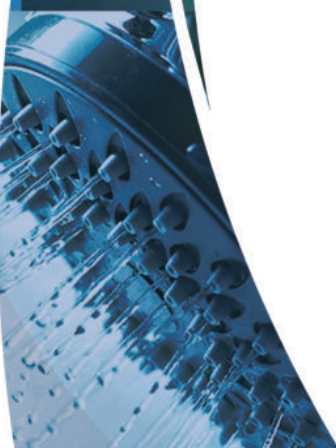
SMART TAP SYSTEM



No Waste Water, **Save Your Precious Money!**
No Wait Water with Desired Temperature,
Enjoy Your Convenient Life!

Your bathroom experience will be dramatically changed.
Quality of life will be improved.

 **TheSL**
원더에스엘





New Paradigm of **Bathroom Culture**

SMART TAP SYSTEM

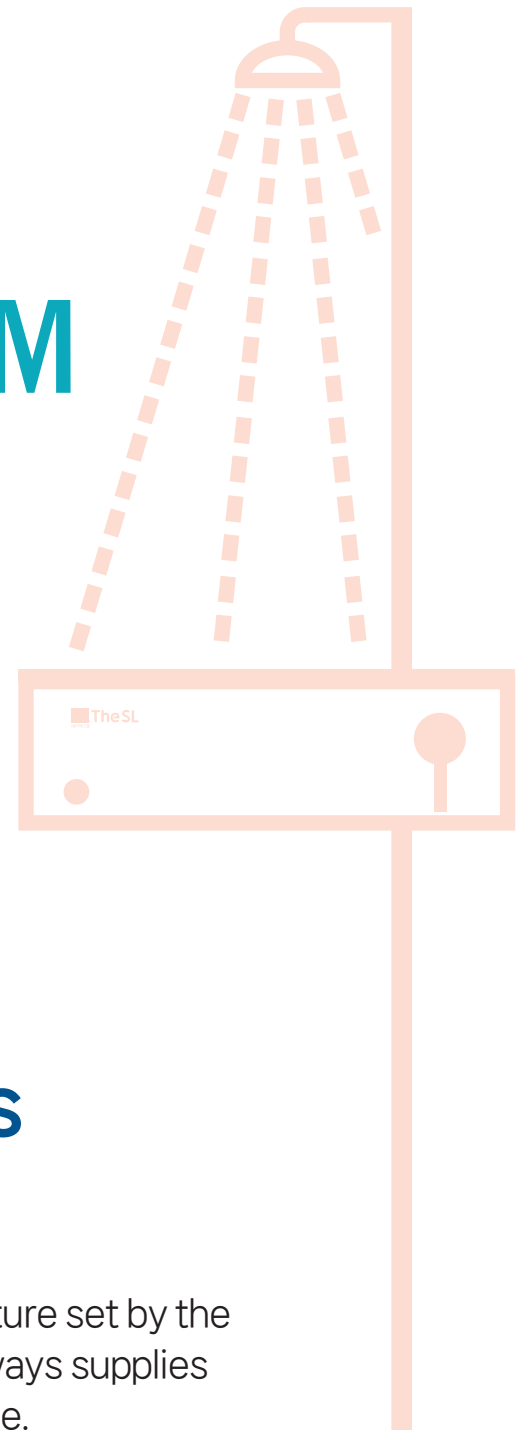
Do you wait for hot water every time you take shower?

Do you waste water thrown away while waiting?

While waiting, what about wasted water?

Do you adjust the faucet knob for the proper temperature?

Have you ever been surprised by temperature changes during use?



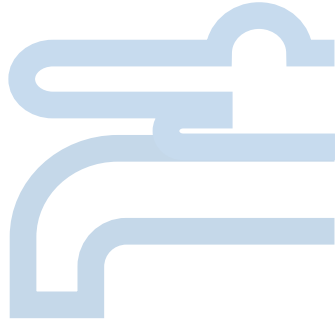
All These Inconveniences Can Be Solved At Once!

Smart Tap System supplies water at the temperature set by the user immediately after turning on the knob, and always supplies water at a constant temperature until the end of use.





SMART TAP SYSTEM



KRW 2,000

Four Family members, each member taking a shower once a day,

KRW 2,000 per month!

Minimizing electricity consumption by optimizing the hot water bath heater control conditions



100 million tons

When take a shower with 'Smart Tap System' once per day per person,

Saving 100 million tons of water annually!

(Average 5L savings per shower / KRW 780 billion savings in hot water and sewerage costs in Korea)



100,000 kg

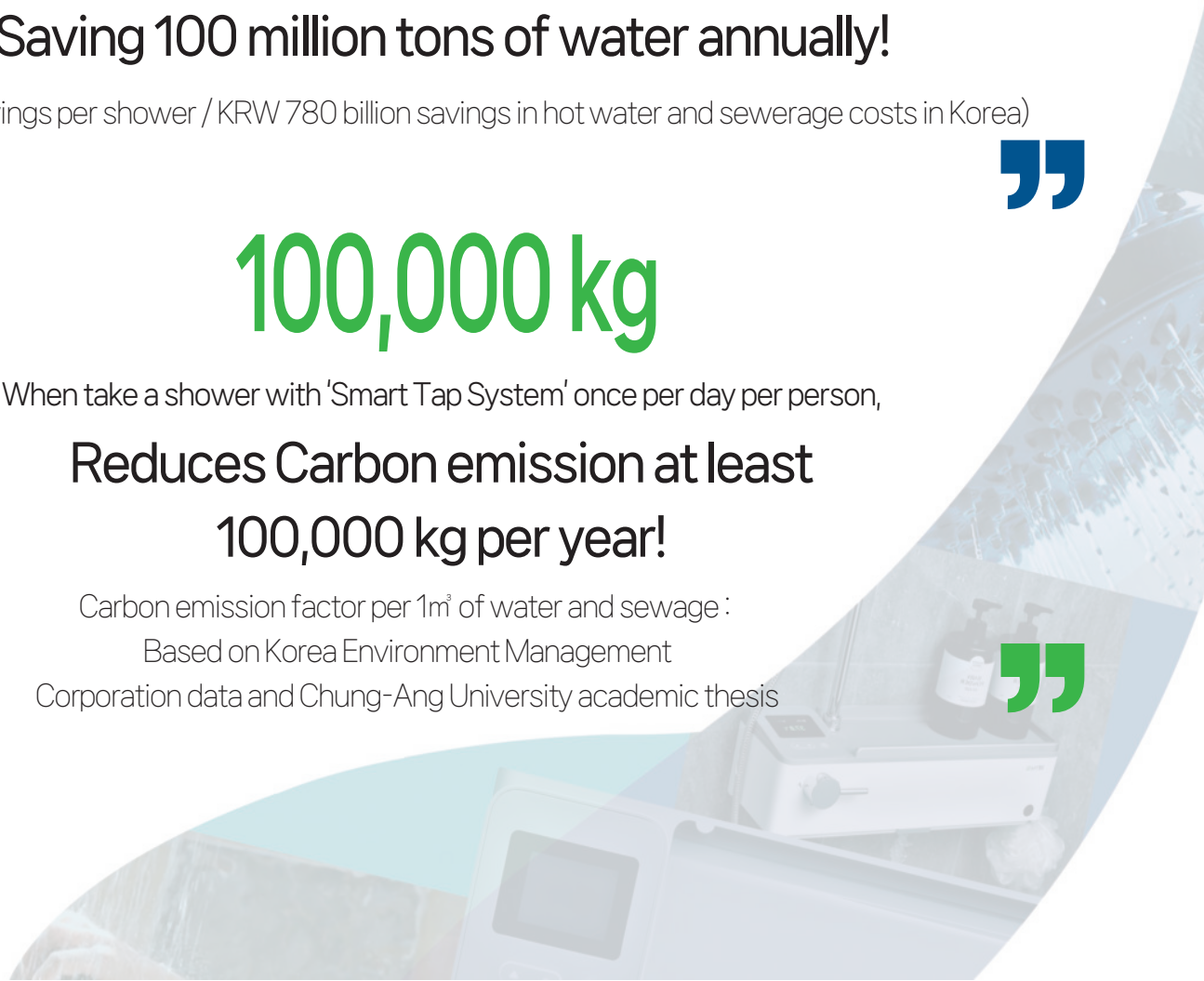
When take a shower with 'Smart Tap System' once per day per person,

Reduces Carbon emission at least 100,000 kg per year!

Carbon emission factor per 1m³ of water and sewage :

Based on Korea Environment Management

Corporation data and Chung-Ang University academic thesis



SMART TAP SYSTEM

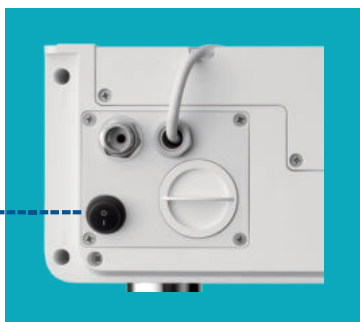


Functions and Usage

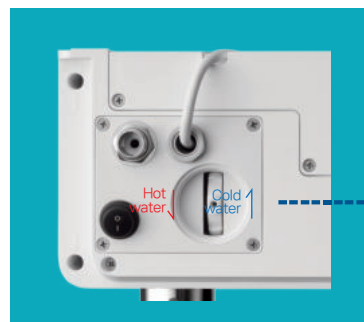
Bubble Towel Hanger

Water outlet direction and flow rate control
 Clockwise: Bathtub, Counter Clockwise: Shower Head
 Adjust the flow rate according to the degree of rotation

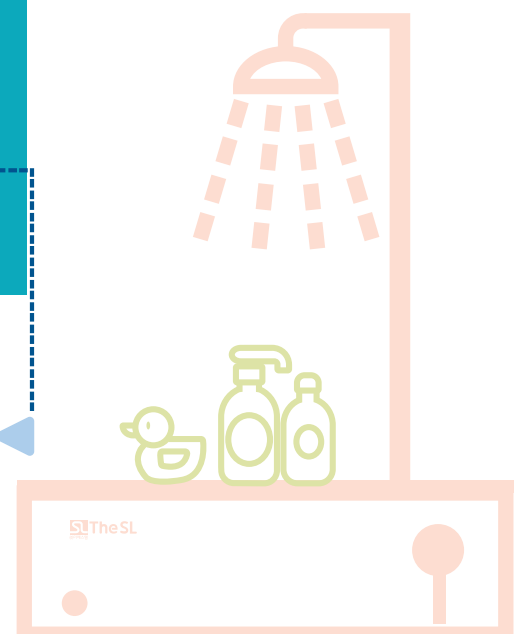
Human Body Detection Sensor
 (Mode of 'Smart Tap System' automatically changes to 'sleep mode' when there is no user for 5 minutes)



ON-OFF Switch
 (User can turn off 'Smart Tap System' with ON/OFF switch on the bottom right)



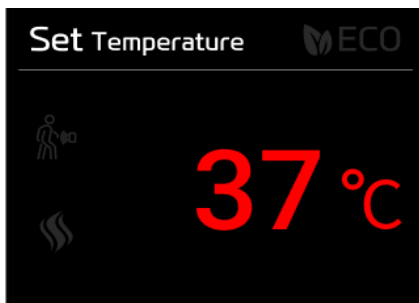
Manual Override
 (in case of power shortage or malfunction, 'Smart Tap System' can be used like the regular faucet after opening the cover on the bottom right)



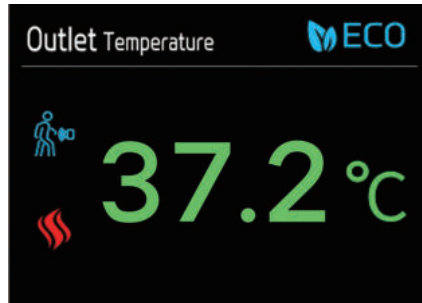
SMART

Functions and Usage of Smart Tap System

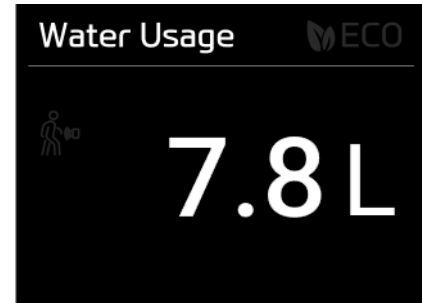
How to Control the Setting Screen



- ▶ Possible to set Desired temperature
Standby Screen
Set the temperature with the UP and DOWN buttons

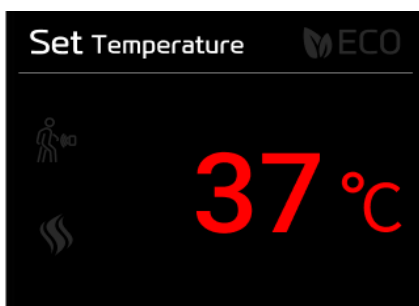


- ▶ Possible to check outlet water temperature
Control Screen with Setting Button
(screen of set temperature ↔ screen of outlet water temperature)

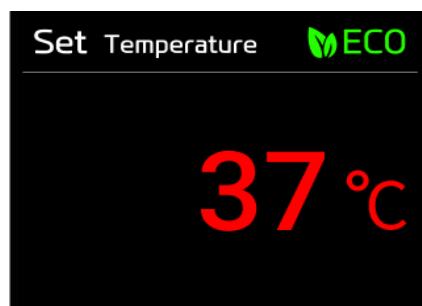


- ▶ Possible to check amount of water usage
Control Screen with Setting Button after use
(screen of set temperature ↔ screen of amount of water usage)

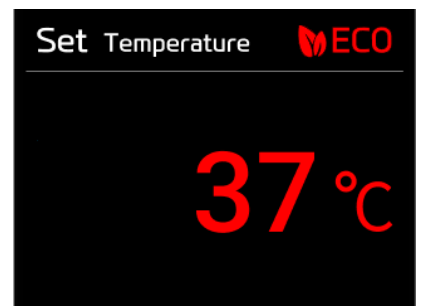
How to Set ECO Mode



Normal Mode



ECO Mode



ECO Mode - Hot water ready

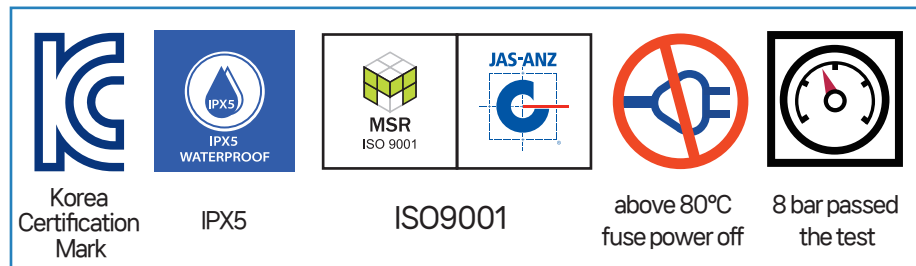
- ▶ Press the Setting Button for more than 3 seconds (Repeat Normal Mode ↔ ECO Mode)
- ▶ When the Setting Button is pressed in ECO Mode, the heater equipped in the water tank starts to heat up and when completed, the color of 'ECO' is turned to red.
- ▶ In ECO Mode the heater equipped in the water tank does not heat the water when there is no user in the standby state, but when the user presses the Setting Button, the heater starts heating.
ECO Mode is an economical mode that does not use electricity in the standby state.



More smartly

- 01 **Digital temperature setting** Accurately up to 45°C in 1°C increments
- 02 **Instant hot water supply** Water at the set temperature with in 2 seconds
- 03 **Hot water at constant temperature**
No need to worry about using hot water in other site in a house
- 04 **Efficient energy saving** Sleep mode when there is no user
ECO mode when not in use
Power off when leaving the house for a long time
- 05 **Check the outlet temperature and water usage**
Check the outlet temperature during use
Check water usage after use
- 06 **Continuously in case of emergency** Manually operated even in case of power outage or breakdown

More safely



More conveniently



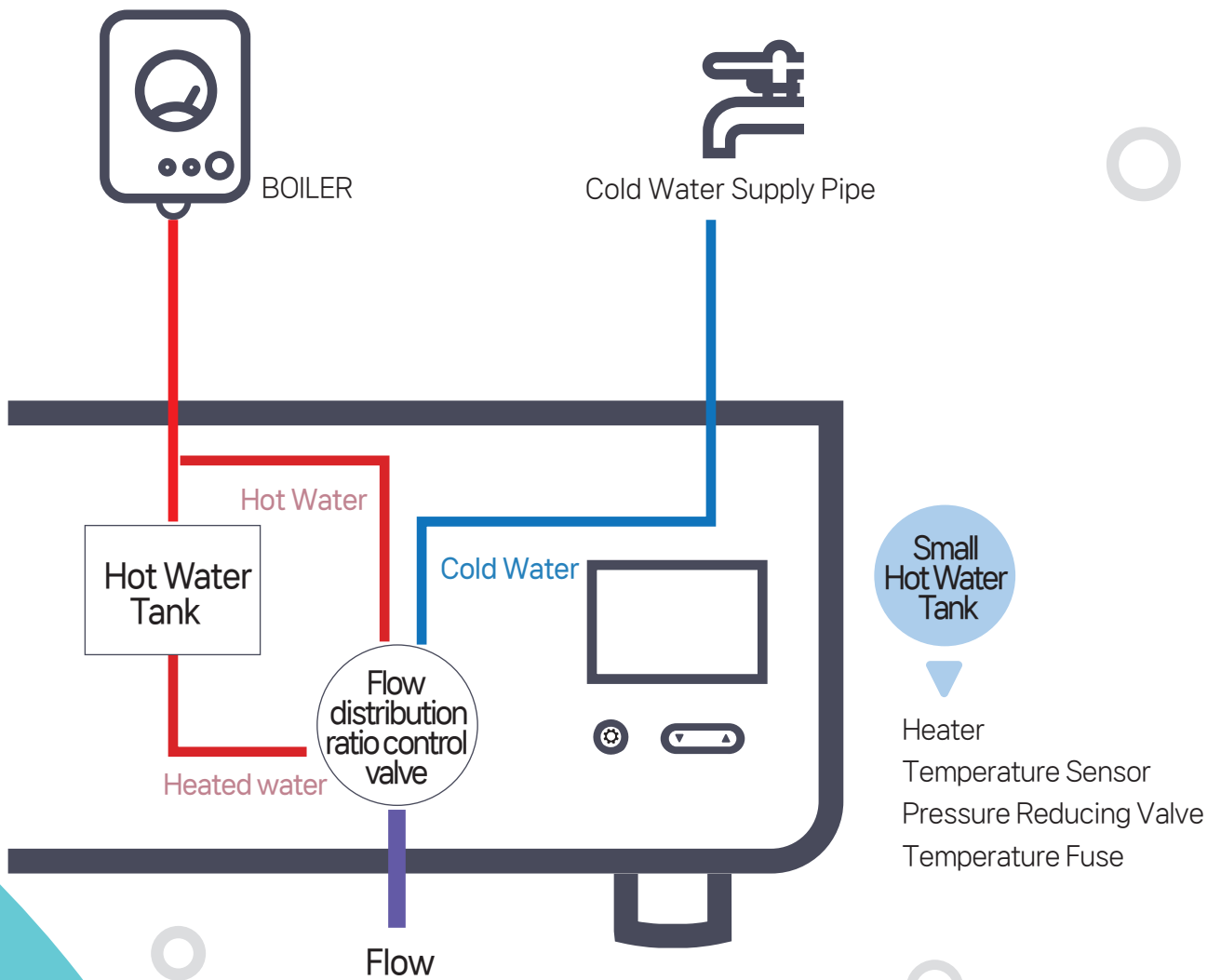
- ▶ **Convenient storage space**
Shelf-type storage of frequently used shower items



- ▶ **Foam towel hanger**
2 towel hooks on the left side of the product

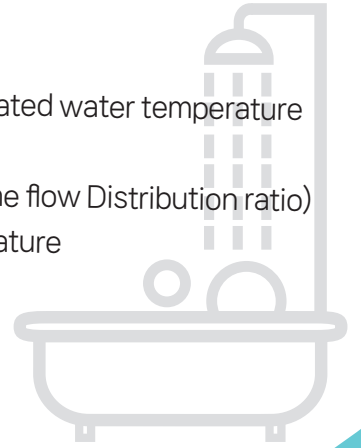
SMART TAP SYSTEM

The Principle and Composition of Smart Tap System



Control Unit

- Check the cold, hot and heated water temperature
- Heater ON/OFF control
- Motor control (Adjusting the flow Distribution ratio)
- Check the desired temperature
- Check the water flow



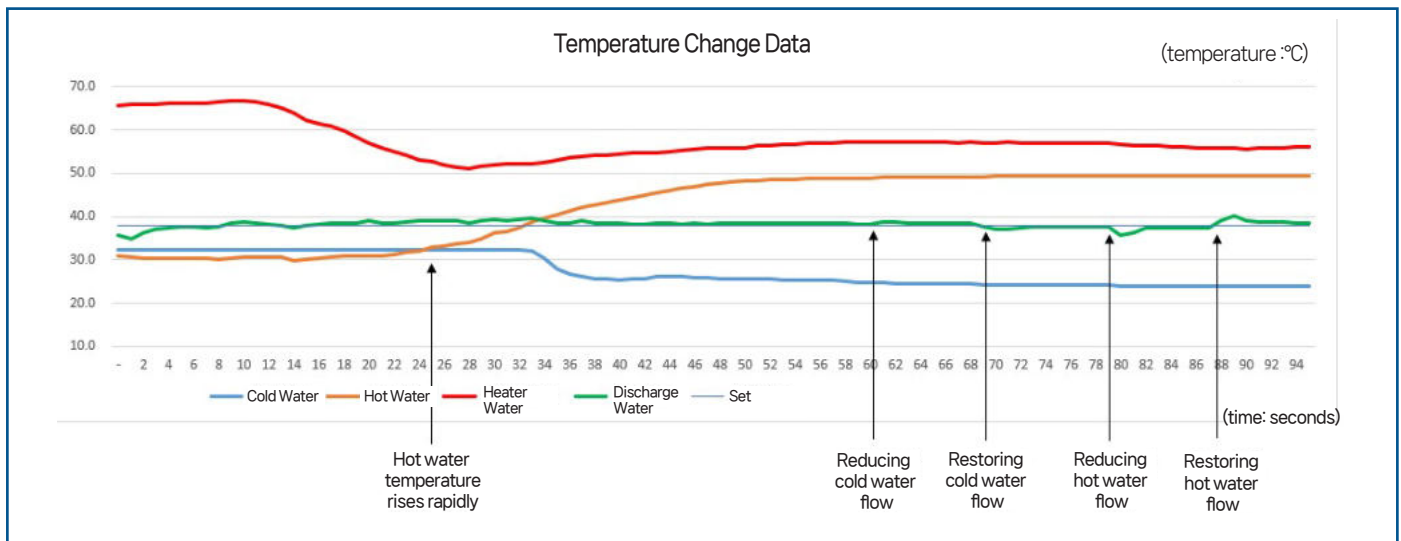


Performance of Smart Tap System

Test Environment

- ▶ Set temperature: 38°C
- ▶ Temperature of hot water is rapidly increased after 25 seconds from the start
- ▶ After 10 seconds when temperature of hot water reaches maximum, the cold water flow rate is reduced
 - After 8 seconds, it is restored to 100 %
- ▶ After 10 seconds when cold water flow rate is restored, the flow rate of hot water is reduced
 - After 8 seconds, it is restored to 100 %

Temperature Change Data



Saving money on monthly water supply and sewerage costs vs. electricity cost when adopting 'Smart Tap System'

Conditions	<ol style="list-style-type: none"> Based on four family members, one shower each person (based on using a shower 4 times in a day) Time to reach maximum temperature: average 40 seconds Amount of output water: 125 ml/sec 		
Tap Water and Sewerage Cost Savings	<ol style="list-style-type: none"> Amount of wasted water = 40 seconds * 125 ml * 4 times = 20 L Amount of wasted water per month = 20 L * 30 days = 600 L Supplied hot water and sewerage costs saved per month = 0.6 ton * (KRW 6,500 + KRW 1,330)/ton = KRW 4,700 		
Electricity Usage	Normal Mode	<ul style="list-style-type: none"> - Always keep the temperature of water in the water tank above a certain temperature for immediate use - Monthly electricity consumption = 14kWh (Power consumption test result of 'Korea Construction Environment Testing & Research Institute') - Monthly electricity bill increase: KRW 1,700/month when progressive tax is not applied, KRW3,000/month when progressive tax is applied 	Mode selection is set by the user using the Setting Button.
	ECO Mode	<ul style="list-style-type: none"> - Heating the water in the hot water tank to a constant temperature at the user's choice - Monthly electricity consumption = 7kWh (50% reduction in power consumption compared to normal mode) 	



Differences Compared With Competing Products

The smart tap system eliminates waiting time for hot water and continuously supplies water at the set temperature. 7,200L of tap water can be saved per household per year.

	Smart Tap System	Regular Faucet	Electric Water Heater
Waiting time	Within 2 seconds	10 to 50 seconds	Within 2 seconds
Waste of water	No (Savings of 7,200L per household per year)	Yes (5L wasted in every shower)	No
Temperature setting	Digital setting	Manual setting with a knob	Manual setting with a knob
Response to sudden change in water temperature	Automatic adjustment to the set temperature → Very convenient	Manual adjustment inevitable → inconvenience and waste of water	Manual adjustment inevitable → Inconvenience and waste of water
Temperature display	Desired temperature and outlet temperature display (Convenient for bathing babies or pets)	Generally no exist	Generally no exist
Flow rate display	Display of flow rate (Awareness of water saving)	Generally no exist	Generally no exist
Product size	560 x 160 x 153 (mm) (For shower shelf)	Various sizes	450 x 450 x 580 (mm) Not suitable for home bathroom installation
Cost Saving	Saving KRW 2,000 ~ 3,000 per Month (Electricity bill : KRW 2,000 ~ 3,000 proportion- per month Water saving : around KRW 5,000 per month)	Wasting around KRW 5,000 per month (Caused by wasting water for four family members)	Korean Won of electricity bills to the amount of use (Continuous use of electric energy by heating cold water)
Convenience features, etc	Convenience functions can be applied Savings on tap water are greater than electricity bills.	Convenience function not applicable Continuous waste of water	Convenience function not applicable Continuous waste of water It is bulky and takes a lot of time to heat cold water, so it is not suitable for home bathroom use.

Company Name: The SL Co., Ltd.
Establishment date: June 28, 2019

Type of Business: Manufacturing

Type of business: Manufacture and sale of taps, valves and similar devices / Manufacture of other household electrical appliances

Main product: Water-saving faucet system that immediately supplies hot water (Smart Tab System)

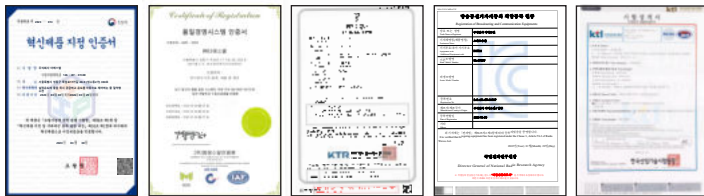
In the faucet market, where has been changed except for design of faucets over the past decades, Our goal is to become a new icon of change and innovation that revolutionizes bathroom culture based on science and technology.

CERTIFICATES



- April 2018** Patent Application _ Faucet Control Device and Method, and Faucet
- May 2019** Patent Registration _ Korean Patent Registration No. 10-1986942 (Faucet Control Device and Method, and Faucet)
- June 2019** Established The SL Co., Ltd.
- May 2021** Selected as 'Eco Startup Support Project' (Government Subsidy: KRW 100 million)
- June 2021** Venture Business Certification (Innovative Growth Type: No. 20210630030078)
- July 2021** Company affiliated research institute certification (No. 2021111577)
- December 2021** 'Eco Startup Support Project' Prototype Development Project Awarded as Excellent Project
- December 2021** Factory registration for manufacturing a smart faucet system
- April 2022** ISO9001 certified
- November 2022** Minister of Trade, Industry and Energy Awarded at the Korea Invention Patent Exhibition
- March 2023** Public Procurement Service 'Innovative Product' certification (No.2023-13)
- May 2023** Smart faucet SL-2000W acquired international waterproof rating IPX5

Innovative product certification, ISO9001 certification, KC certification, IPX5



Patent Registration: 5 Korean Patent, 3 Overseas Patent (China, Japan, US)



Venture Business Certification, Company Affiliated Research Institute, Factory Registration





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