



# Digital Non-Magnetic Water Meter

# DAEHAN WATER METER

Supplier of Korea On-Line E-Procurement System



**DHS** DAEHAN SMART METER CO.,LTD.

<https://www.daehanmeter.com>



a factory view



Full automatic water meter test 1,6 (multiple of 100 to 200) inspection table weighing& measuring function work (15 to 50 mm)



Full automatic water meter test 1,6 (multiple of 100 to 200) inspection table



German Zener Company (15-50 mm)



Water meter casting production processing facility



Retained Status with gapset injection machine in water meter



Anti-Frozen Water Meter and Back Flow Exhibition Products



Digital Electronic Water Meter Display Products



Thermostatic Humidifier (Water meter anti-freeze tester)

Thank you very much to the company that led our company develop through countless advice since **Daehan Smart Meter Co., Ltd.** was founded and to the customers who trusted and bought **Daehan Smart Meter co., Ltd's** products.

For more than 30 years in the water meter industry, we have been producing water appliances (KS marked products) as well as measuring instruments by casting, injecting, and molding. Based on Know-How, which has accumulated experience and technology, **Daehan Smart Meter co., Ltd** has been born again as a manufacturer and seller of water meters.

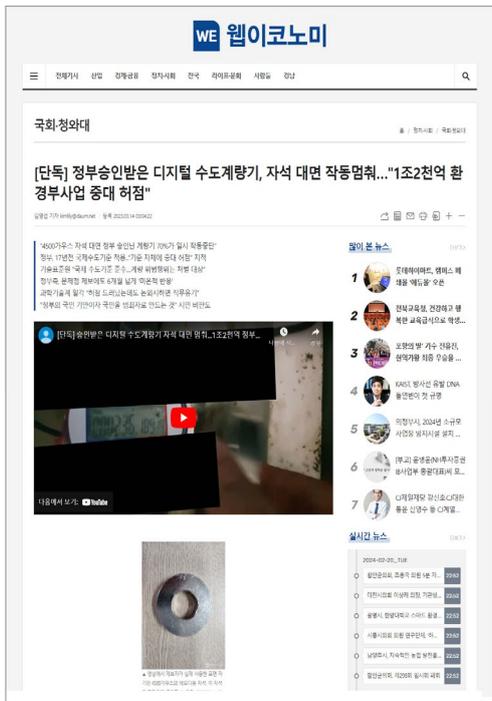
In order to realize the management philosophy of "Best Quality and to gives the trust to customers, all executives and employees gave a promise to do their best with one mind, and to expand and transfer our company in January 2020 in order to focus more on high quality and new product development. Thank you.

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# "A Press release on existing digital water meters"

Digital water meter, magnet-facing (It means magnetic contact on digital water meter) which is approved by Government stops working. "It means a major flaw in the Ministry of Environment's project worth 1.2 trillion won"



The Use of 70% of the water meter that was approved by the government in the face of 4,500 Gauss Magnet, was suspended temporarily by Government.

The government had applied the international water standards 17 years ago.

It was significant loopholes in the standards themselves. "Intellectual government responded to the report of problems for more than six months. Some scientist and technologist community have criticized negligence of the government's duty" It means that made the people criminals as well as the overnment's national deception."

[Seoul = Web Economy] Reporter Kim Young-Seop = The smart wait-and-see management project for local water supply (hereinafter referred to as the smart water supply project), which the Ministry of Environment has been ambitiously carrying out for four years with a total budget of KRW 1,207.3 trillion, including national and local expenses fall into cliff of failure.

This is because when the magnet touch to the digital water meter which occupies the core technology position of the project, the working operation of the electronic display unit was temporarily stopped so that the water meter failed to measure the tap water used while the magnet was attached on it.

Of course digital water meters supplied to the government and local governments must be obtained a formal approval in accordance with the water standards regulation.

Moreover, if the electronic display itself is incorrectly measured based on the remote meter reading system, it will automatically become a problem. The whole smart water supply project, which started about three years ago, has faced a serious situation that requires reassessment from the beginning. This magnetic, which temporarily suspended the operation of the digital meter, has a surface magnetic field of 4,500 Gauss (symbol G) magnetic strength and a small size that is wrapped in a palm. It means that very small size magnetic made water meter system not start working.

Anyone can easily buy it at a magnetic store for just tens of thousands of won.

The government said that we have followed international water standards regulations. However, the international standard regulations that the government applied was established 17 years ago. As a result, despite the fact that magnetic parts have become important in using digital water meters in recent years, The regulation on magnetic parts of the water meter have been never changed during nearly 20 years.

A government official said, "It is illegal if a magnetic strength exceeds the current standard regulations of 1,200 Gauss's magnetic volume." Furthermore, the official said, "Experts have a common status that the electronic water meter itself is being destroyed if that happens.

When the magnet was removed, the water meter system operate normally.

It show us the government's easy attitude in applying old water meter standard regulations which cannot keep up with technological changes

Source: Kim Young-seop, Seoul Web Economy Reporter: 2023.03.14 [https://www.webeconomy.co.kr ]

- Digital water meters, facing magnets that cost tens of thousands of won, most of them will stop working, causing hundreds of billions of won to be expected to be wasted when replacing problem meters that estimate 1 million units,
- The National Institute of Technology and Standards said, "Strengthening water standards must have a reasonable reason to notify other countries of the reason."
- The National Institute of Technology and Standards said, "Strengthening water standards must have a reasonable reason to notify other countries of the reason."

# "Press release on existing digital water meters"

## Magnetic Facing 'Breakdown' Digital Water Meter/Desk



### ◀ Anchor ▶

Recently, a project to replace water meters with digital water meters is underway across the country. Hongseong-gun also commissioned the Korea Water Resources Corporation to install more than 3,000 digital water meters. If you put the magnet close, the meter stops and there is no measure to prevent it. Reporter Kim Tae-wook covered it.

### ◀ Report ▶

This is a digital water meter that was recently installed. When you put a magnet on a normally operating meter, it will fail. The government is pushing for a smart wait-and-see management infrastructure project across the country by spending more than 50 billion won to check and manage real-time water usage. Hongseong-gun also entrusted the project to the Korea Water Resources Corporation and installed more than 3,000 such digital water meters since last year. Kwon Young-sik / Member of Hongseong-gun said, "The Korea Water Resources Corporation has entrusted the problematic meter to our Hongseong-gun waterworks office. It is very questionable why the Korea Water Resources Corporation chose the meter." When the county council raised the issue, Hongseong-gun called for the replacement of the digital water meter, which is stopped by strong magnetic force. However, the Korea Water Resources Corporation has answered that there are no replacement plans. There is no problem because the meter meets the current technical standards of the water meter. However, "Anyone can easily purchase these circular magnets that stop the meter from working through the Internet." If the meter is modulated for the purpose of manipulating the measured value, it will be subject to imprisonment for up to three years or a fine of up to 30 million won according to the relevant law. However, it is not easy for local governments to crack down on the act of intentionally removing and attaching magnets for the purpose of manipulating measured values every time.

Kim Joo-hwan, head of Hongseong-gun Waterworks Office, said, "There is not much to do if it is malicious. However, there is something that needs to be done by strengthening the standards, and I think those are issues that the government needs to set standards."

The Ministry of Trade, Industry and Energy, which sets the relevant standards, said the current water meter technical standards follow international standards and are not considering raising the standards to be more resistant to stronger magnets. I'm Kim Taewook from MBC News.

# MANIPULATION PREVENTIVE CAP FOR TANGENTIAL WING-TYPE HIGHLY-SENSITIVE MULTI - DRY WATER METER

MD Type : 15, 20, 25, 32, 40, 50mm



## Performance and Dimensions

Specification(mm)		15	20	25	32	40	50
Q3/Q1 R	Unit	100	100	100	100	100	100
Starting flow	L/h	6	10	12	15	30	50
Q1	m <sup>3</sup> /h	0.025	0.04	0.063	0.1	0.16	0.25
Q2	m <sup>3</sup> /h	0.04	0.064	0.1	0.16	0.256	0.4
Q3	m <sup>3</sup> /h	2.5	4	6.3	10	16	25
Maximum indication	m <sup>3</sup>	9,999			99,999		
Length	mm	165	190	225	230	245	305
Height	mm	100	109	114	116	130	155
Width	mm	95	100	100	100	117	138
Meter connection screws	inch	PF 3/4	PF 1	PF 1 1/4	PF 1 1/2	PF 2	PF 2 1/2
Mounting connection screws	inch	PT 1/2	PT 3/4	PT 1	PT 1 1/4	PT 1 1/2	PT 2

- Installation conditions : Meter face horizontal
- Less than maximum operating temperature : 30°C

- Maximum operating pressure : 10bar

# Digital Non-Magnetic Inline Water Meter with Backflow Prevention



**Patent Application**  
New Product New Technology

**Patented product**  
Prevention of backflow microflow cutoff

Digital non-magnetic inline water meter with backflow prevention/freeze protection featuring tamper-proof cap with transparent magnifying lens.

## Product Features

- Utilizes MR sensor technology, rendering it immune to fraudulent use with external strong magnets.
- Allows measurement without susceptibility to external magnetic interference.
- Economic and convenient meter reading with a non-magnetic water meter, extending battery life.
- Enables remote meter reading, providing economic benefits.
- Equipped with freeze prevention function to preempt winter frost damage.
- Fully waterproof display unit (IP68), suitable for frequent flooding areas.
- Electronic display unit rated as Grade C, resistant to freezing conditions.
- Reinforced with PPS (polyphenylene sulfide) for enhanced frost resistance.
- Incorporates a backflow prevention device, ensuring complete blockage of reverse flow even at microflow

## Development of Digital Non-Magnetic Inline Water Meter (15mm~50mm)

**Overview** A non-magnetic water meter utilizing MR sensor technology, making it immune to fraudulent use with external magnets (15mm~50mm).

**Improvements**

- Incorporates temperature data collection for freeze prevention.
- Includes magnet detection feature to prevent unauthorized meter tampering.
- Enhances quality to achieve anti-fouling and 100% flow rate accuracy.
- Ensures magnets pass rigorous testing (4000~10000 gauss, denoted as G).

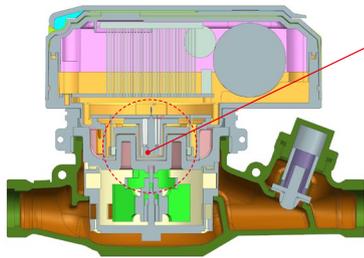
## Performance and Dimensions

Standard(mm)		Unit	15	20	25	32	40	50
Q <sub>3</sub> /Q <sub>1</sub> R			100 fold	100 fold	100 fold	100 fold	100 fold	100 fold
Starting Flow Rate		L/h	6	10	12	15	30	50
Minimum Flow Rate (Q <sub>1</sub> )	± 5.0 %	m <sup>3</sup> /h	0,016	0,025	0,04	0,063	0,1	0,16
Transition Flow Rate(Q <sub>2</sub> /Q <sub>1</sub> R) : 1.6	± 2.0 %	m <sup>3</sup> /h	0,0256	0,04	0,064	0,1008	0,16	0,256
Maximum Flow Rate(Q <sub>3</sub> )	± 2.0 %	m <sup>3</sup> /h	1,6	2,5	4,0	6,3	10	16
Optimal Usage Flow Range		m <sup>3</sup> /h	0,016~1,2	0,025~1,2	0,04~1,5	0,063~3,0	0,1~5,0	0,16~8,0
Maximum Indicated Volume		m <sup>3</sup>	999,999,999 99					
Meter Length	<i>L</i>		165	190	225	230	245	305
Meter Height	<i>H</i>		100	109	114	116	130	155
Meter Width	<i>W</i>		95	100	100	100	117	138
Meter Connection Screw	<i>D</i>		PT 3/4	PF 1	PT 1 1/4	PF 1 1/2	PF 2	PF 2 1/2
Installation Connection Screw	(inch)		PT 1/2	PT 3/4	PT 1	PT 1 1/4	PT 1 1/2	PT 2

■ Installation Condition: Horizontal (meter face horizontal) ■ Maximum Operating Pressure: 10 bar ■ Maximum Operating Temperature: Below 30°C

# Digital Non-Magnetic Integrated Water Meter

15, 20, 25, 32, 40, 50mm



## Product Features

- A non-magnetic integrated water meter with digital terminals, eliminating the use of traditional MR sensor magnets, making it impossible for fraudulent use even with strong external magnets.
- Prevents backflow and blocks fine flow 100% (based on Seoul standards).
- Built-in wireless communication for easy meter reading, economical operation, and extended battery life.
- Digitally integrated for easy installation and maintenance with a one-stop service system.
- Remote meter reading capability leading to reduced installation costs (by 50%).
- Equipped with anti-freezing function to prevent damages caused by freezing in winter.
- Fully waterproof display unit (IP 68) allowing usage even in areas prone to flooding.
- No communication cables reducing communication errors and facilitating maintenance.

## Development of Digital Non-Magnetic Integrated Water Meter (15mm~50mm)

### Overview

**Overview** A non-magnetic integrated water meter that does not utilize MR sensor magnets, making it impossible for fraudulent use even with strong external magnets. (15mm~50mm)

### Improvements

- Integration of temperature data collection for freeze prevention.
- Incorporation of magnetic field detection for prevention of water meter misuse.
- Adoption of Seoul standard protocol.
- Improvement in water resistance and 100% flow rate accuracy.
- Testing of magnets within the range of 4000~10000 gauss.
- Integration of NFC functionality for maintenance and management automation.

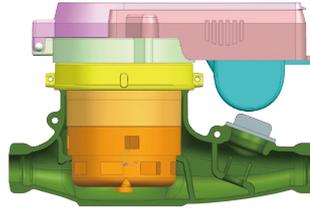
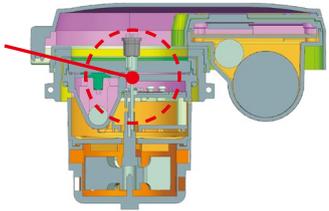
## Performance and Dimensions

Standard(mm)		Unit	15	20	25	32	40	50
Q <sub>3</sub> /Q <sub>1</sub> R			100 fold	100 fold	100 fold	100 fold	100 fold	100 fold
Starting Flow Rate		L/h	6	10	12	15	30	50
Minimum Flow Rate (Q <sub>1</sub> )	± 5.0 %	m <sup>3</sup> /h	0.016	0.025	0.04	0.063	0.1	0.16
Transition Flow Rate(Q <sub>2</sub> /Q <sub>1</sub> R) : 1.6	± 2.0 %	m <sup>3</sup> /h	0.0256	0.04	0.064	0.1008	0.16	0.256
Maximum Flow Rate(Q <sub>3</sub> )	± 2.0 %	m <sup>3</sup> /h	1.6	2.5	4.0	6.3	10	16
Optimal Usage Flow Range		m <sup>3</sup> /h	0.016~1.2	0.025~1.2	0.04~1.5	0.063~3.0	0.1~5.0	0.16~8.0
Maximum Indicated Volume		m <sup>3</sup>	999,999.999 99					
Meter Length	L		165	190	225	230	245	305
Meter Height	H		100	109	114	116	130	155
Meter Width	W		95	100	100	100	117	138
Meter Connection Screw	D		PT 3/4	PF 1	PT 1 1/4	PF 1 1/2	PF 2	PF 2 1/2
Installation Connection Screw	(inch)		PT 1/2	PT 3/4	PT 1	PT 1 1/4	PT 1 1/2	PT 2

■ Installation Condition: Horizontal (meter face horizontal) ■ Maximum Operating Pressure: 10 bar ■ Maximum Operating Temperature: Below 30°C

# Double-dampable non-magnetic terminal integrated water meter

15, 20, 25, 32, 40, 50mm



## Product Features

- This water meter is an encapsulated wet type non-magnetic hybrid meter, which eliminates the use of magnets typically found in conventional MR sensor-based meters, rendering it tamper-proof against strong external magnets.
- It features a hybrid design with both analog and digital measurement displays, ensuring both user-friendliness and reliability.
- Guarantees backflow prevention and 100% blockage of fine flow (based on Seoul standards).
- Built-in wireless communication enables easy and economical meter reading, extending battery life significantly.
- The encapsulated wet type hybrid design facilitates easy installation and implements a one-stop service system for maintenance.
- Remote meter reading capability leads to cost savings in installation (up to 50%).
- Equipped with frost prevention functionality to prevent damage during winter freezes.
- Its display unit is completely waterproof (IP 68), making it suitable for use even in areas prone to frequent flooding.
- With no communication cables, the likelihood of communication errors decreases, making maintenance convenient.

## Development of Encapsulated Wet Type Non-magnetic Hybrid Water Meter (15mm~50mm)

### Overview

**This water meter, as a non-magnetic type, renders tampering with strong external magnets impossible, making it highly secure against unauthorized usage (15mm~50mm).**

### Improvements

- Integration of temperature data collection for frost prevention.
- Inclusion of magnetic field detection to prevent meter tampering.
- Enhancement of anti-corrosion and 100% water rate efficiency.
- Adoption of Seoul city standard protocols.
- Incorporation of NFC functionality for maintenance and management automation.
- Testing magnetic strength ranging from 4000 to 10000 gauss.
- Reduction in frequency of complaints during billing.

## Performance and Dimensions

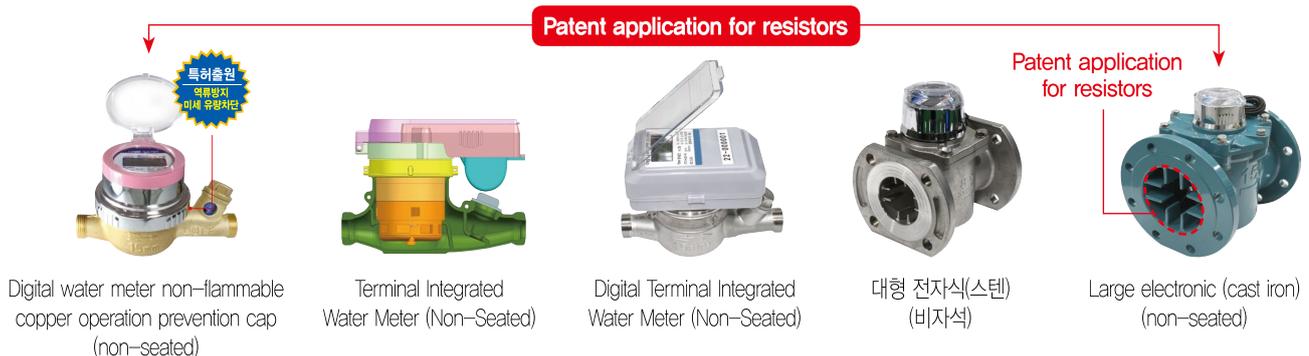
Standard(mm)		Unit	15	20	25	32	40	50	
Q <sub>3</sub> /Q <sub>1</sub> R			100 fold	100 fold	100 fold	100 fold	100 fold	100 fold	
Starting Flow Rate		L/h	6	10	12	15	30	50	
Minimum Flow Rate(Q <sub>1</sub> )		± 5.0 %	m <sup>3</sup> /h	0,016	0,025	0,04	0,063	0,1	0,16
Transition Flow Rate(Q <sub>2</sub> /Q <sub>1</sub> R) : 1,6		± 2.0 %	m <sup>3</sup> /h	0,0256	0,04	0,064	0,2008	0,16	0,256
Maximum Flow Rate(Q <sub>3</sub> )		± 2.0 %	m <sup>3</sup> /h	1,6	2,5	4,0	6,3	10	16
Optimal Usage Flow Range			m <sup>3</sup> /h	0,016~1,2	0,025~1,2	0,04~1,5	0,063~3,0	0,1~5,0	0,16~8,0
Maximum Indicated Volume			m <sup>3</sup>	999,999,999 ∞					
Meter Length	<i>L</i>		165	190	225	230	245	305	
Meter Height	<i>H</i>		100	109	114	116	130	155	
Meter Width	<i>W</i>		95	100	100	100	117	138	
Meter Connection Screw	<i>D</i>		PT 3/4	PF 1	PT 1 1/4	PF 1 1/2	PF 2	PF 2 1/2	
Installation Connection Screw	(inch)		PT 1/2	PT 3/4	PT 1	PT 1 1/4	PT 1 1/2	PT 2	

■ Installation Condition: Horizontal (meter face horizontal) ■ Maximum Operating Pressure: 10 bar ■ Maximum Operating Temperature: Below 30°C

# Smart Remote meter reading solution (configuration diagram)



## New Product New Technology Digital Non-Magnetic Water Meter Non-magnetic digital water meter

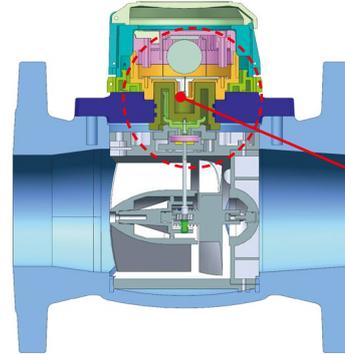


# Large digital non-magnetic water meter (for wired/wireless remote meter reading)

40, 50, 65, 80, 100, 150, 200, 250, 300mm



Stainless steel casts



Digital Large Stainless High Sensitivity Water Meter



## Product Features

- Since MR sensor-type magnets are not used, it is impossible to use them illegally even if strong magnets are used from the outside.
- It can be measured without the influence of external magnetic force.
- The non-magnetic water meter makes it easy to measure, economical, and has a longer battery life.
- It is easy to construct with an integrated digital water meter.
- Remote meter reading is possible and economical.
- It has a freeze prevention function, so damage caused by freezing in winter can be prevented in advance.
- The display is fully waterproof (IP 68) so it can be used even in habitually flooded areas.
- Electronic indicators have environmental grade C type and are resistant to freezing.

## Large digital non-magnetic water meter (for wired/wireless remote meter reading)

### Overview

As a large non-magnetic water meter, it does not use MR sensor-type magnets from the outside. It is a water meter that cannot be used illegally even with strong magnets. (40mm to 300mm)

### Improvements

- Equipped with temperature data collection to prevent freezing
- Equipped with magnetic field(magnet) detection to prevent illegal use of water meters
- Satisfy durability even when using a large 9,000 mAh battery for 24 hours
- Prevention of water flow and 100% improvement in quality
- Magnet 4000-10000(gauss, symbol G) test abnormalities

## Performance Table

Category		Unit	40	50	65	80	100	150	200	250	300	
Q <sub>4</sub>	Overload flow rate once in Q <sub>max</sub> for 24 hours or within 1.2XQ <sub>max</sub> (±2%) 5 minutes	(m <sup>3</sup> /h)	78.75	78.75	78.75	125	200	312.5	500	787.5	1250	
Q <sub>3</sub>	Maximum flow rate (±2.0%)	(m <sup>3</sup> /h)	63	63	63	100	160	250	400	630	1000	
Transition flow rate (Q <sub>2</sub> /Q <sub>1</sub> R) : 1.6	Transition flow rate (±2.0%)	(m <sup>3</sup> /h)	0.806	0.806	0.806	1.0	1.6	3.2	5.12	5.28	16.0	
Q <sub>1</sub>	Minimum flow rate (±5.0%)	(m <sup>3</sup> /h)	0.504	0.504	0.504	0.625	1.0	2.0	3.2	6.3	10.0	
	Starting flow rate	(m <sup>3</sup> /h)	0.30	0.30	0.30	0.35	0.40	1.0	1.5	3.0	8.0	
	Magnification(Q <sub>3</sub> /Q <sub>1</sub> )		125	125	125	160	160	125	125	100	100	
	Drainage(Q <sub>2</sub> /Q <sub>1</sub> )		1.6									
	Maximum time limit(m <sup>3</sup> )		9,999,999.999 g									
	Minimum amount of time(ℓ)		1ℓ					10ℓ				
	Terms of Use		Beverage (constant) 30°C or lower									

# Backflow preventive, differential pressure-type manipulation preventive cap for freeze preventive water meter (Airbag function)

● MW Type : 15(13), 20, 25, 32, 40, 50mm

Selected as outcome sharing task (Quality improvement) by Korea Water Resources Corporation

A product selected as freeze preventive water meter (Airbag built-in type) by Korea Water Resources Corporation



항온항습기 수도미터 동파방지 테스트과정



항온항습기(수도미터 동파방지 전자동시험기)



Stainless freeze preventive (Airbag), differential pressure-type manipulation preventive cap



Differential pressure, freeze preventive (Airbag) manipulation preventive cap



Differential pressure, freeze preventive, transparent magnifying lens

When ordering as manipulation preventive cap, (City, Province) article number carving is plated and it has clear image for 10 years, which was approved and adopted by Office of Waterworks, Seoul



Manipulation preventive cap for freeze preventive wet water meter

- Special structure which absorbs cubical expansion when frozen
- Polycarbonate glass, being reinforced by 150times

### Characteristic

- Case with airbag is built in main body of water meter is filled with air pressure of 0.7MPa in-between impeller and gear set, airbag absorbs cubical expansion when frozen, which prevents burst by freezing in advance.
- By decreasing space between glass plate and indicating unit, remaining water does not collect and it minimizes volume of water meter.
- Passed performance test (16 times repeated test of hot water thawing after cooling of  $-20^{\circ}\text{C}$  for 48hours) for freeze preventive water meter, carried out by Waterworks Research Institution, Office of Waterworks, Seoul
- Possible to manufacture in various types like common type, backflow preventive type and manipulation preventive type, according to order from user

Wet lead free freeze preventive airbag transparent magnifying lens



Backflow preventive, differential pressure

# Manipulation preventive cap for stainless water meter (for backflow prevention, freeze prevention)

● MW Type : 15, 20, 25, 32, 40, 50mm



Check type (Double-jet dry) stainless manipulation preventive cap



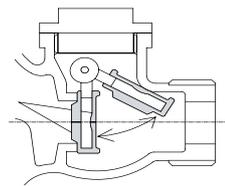
Check type (Stainless) freeze preventive, manipulation preventive cap



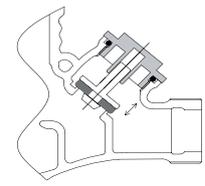
Differential pressure (Stainless) type freeze preventive, manipulation preventive cap

## Characteristic

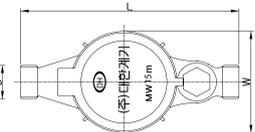
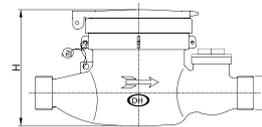
- Being manufactured with new material, stainless,
  - it has no toxicity and does not react to harmful chemicals,
  - it has strong corrosion-resistance internally and externally.
- Having excellent abrasion-resistance, it has permanent durability and it is eco-friendly product which can be recycled.
- It has strong resistance against change in quantity of flow and temperature and excellent durability.
- It has smart appearance thanks to suitable surface treatment.
- Possible to manufacture backflow preventive water meter(Check type, differential pressure type)
- Possible to manufacture freeze preventive water meter



Backflow Preventive, Check Type



Backflow Preventive, Differential Pressure



Outside View

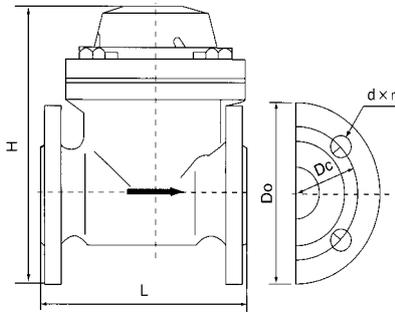
## Performance and Dimension

Standard(mm)		단위	13(15)	20	25	32	40	50
Starting flow		L/h	6	10	12	15	30	50
Minimum quantity of flow (Q1)	±5%	m³/h	0.016	0.025	0.04	0.063	0.1	0.16
Variable quantity of flow (Q2/Q1) : 1.6	±2%	m³/h	0.0256	0.04	0.064	0.1008	0.16	0.256
Maximum quantity of flow(Q3)	±2%	m³/h	1.6	2.5	4.0	6.3	10	16
적정사용유량범위		m³/h	0.016~0.8	0.025~1.2	0.04~1.5	0.63~3.0	0.1~5.0	0.16~8.0
최대지시량		m³	9,999	99,999				999,999
미터전장	L (mm)		165	190	225	230	245	305
미터높이	H (mm)		100	109	114	116	130	155
미터 폭	W (mm)		95	100	100	100	117	138
미터접속나사	D (inch)		PF ¼	PF 1	PF 1 ¼	PF 1 ½	PF 2	PF 2 ½
설치접속나사	(inch)		PT ½	PT ¾	PT1	PT 1 ¼	PT 1 ½	PT2

■ Installation condition: Meter face to be horizontal ■ Maximum pressure for use: 10bar ■ Maximum temperature for use: below 30°C

# Eco-friendly water meter (Stainless highly-sensitive large water meter)

- 40, 50, 80, 100, 150, 200, 250, 300mm



Stainless highly-sensitive large water meter

Digital Large Cast Iron High Sensitivity Water Meter

## Characteristic

- Being developed with new material, it has longer durability compared with other product thanks to elasticity of material in spite of water impact.
- Being manufactured with stainless material,
  - it has no toxicity and does not react to harmful chemicals.
  - it has strong corrosion-resistance internally and externally.
- Having excellent abrasion-resistance, it has permanent durability and it is eco-friendly product which can be recycled.
- It has smart appearance thanks to suitable surface treatment.
- It has high hardness and longer durability compared with other product.
- It is possible to install at any angle, i.e. horizontal, vertical or sloping surface.
- Bubble is entirely eliminated because indicating unit is perfectly sealed (IP 68 Grade).
- Rotating rotor is applied which maintain balance according to hydrodynamics.
- Reading is easy because indicating unit can rotates by 360°.
- Durability is increased thanks to overload resistance function.

## Performance Table

Bore dimension	mm	40	50	80	100	150	200	250	300	
Qmax(Q4)	Overload quantity of flow (m <sup>3</sup> /h)	78.75	78.75	125	200	312.5	560	787.5	1250	
	One time among 24hours in Q max or 1,2xQmax(±2%) within 5minutes									
Qn(Q3)	Maximum quantity of flow(±2%) (m <sup>3</sup> /h)	63	63	100	160	250	400	630	1000	
Qmin(Q1)	전이유량(±2%) (m <sup>3</sup> /h)	0,8	0,8	1,0	1,6	3,2	5,12	10,08	16,0	
	최소유량(±5%) (m <sup>3</sup> /h)	0,5	0,5	0,625	1,0	2,0	3,2	6,3	10,0	
	시동유량 (m <sup>3</sup> /h)	0,30	0,30	0,35	0,40	1,0	1,5	3,0	8,0	
	최대지시량(m <sup>3</sup> )	999,999					999,999			
	최소지시량(ℓ)	1 ℓ					10 ℓ			
	사용조건	음용수(상수)40℃ 이하								

# Piping diagram of angle, pressure reducing valve for water supply, water meter

Piping diagram of angle pressure reducing valve for waterworks, freeze preventive water meter



length of pipe 290mm

Piping diagram of angle pressure reducing valve for waterworks, remote type single-jet water meter



length of pipe 250mm

Piping diagram of angle pressure reducing valve for waterworks, dry single-jet water meter

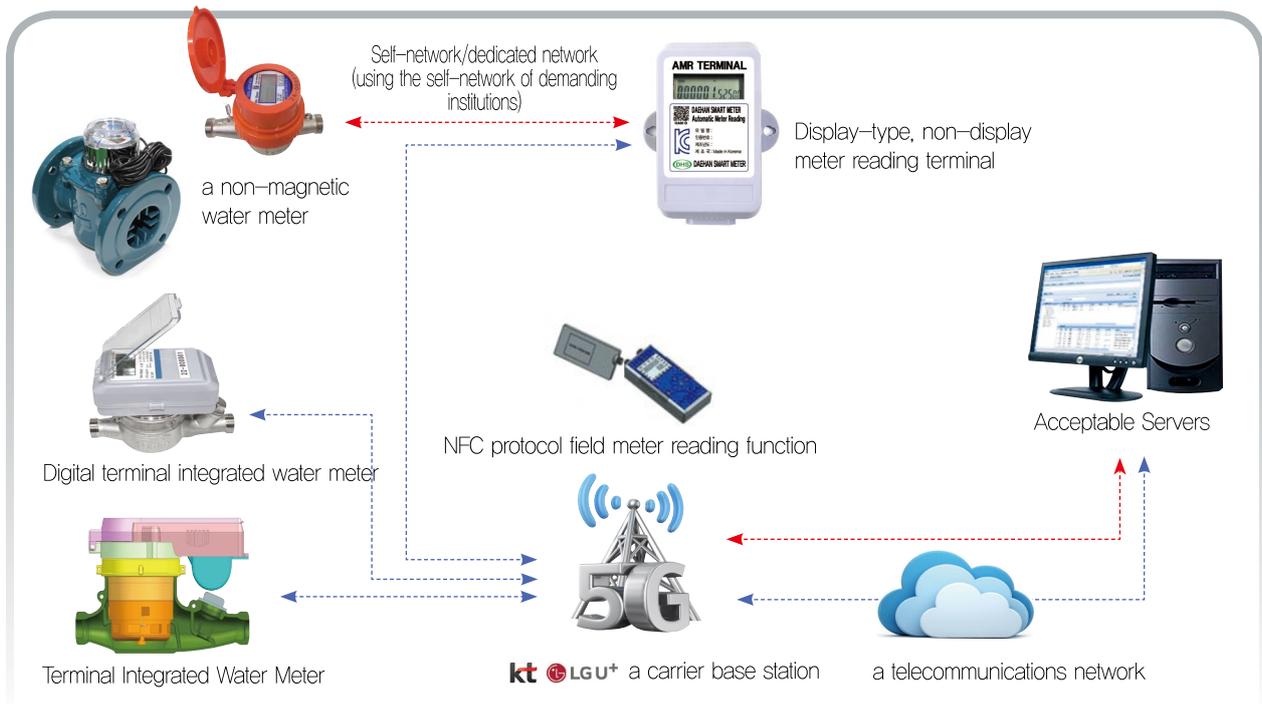


length of pipe 250mm

## Union pipe nut for piping (Dimension)



# Smart Remote meter reading solution (configuration diagram)



## New Product New Technology Digital Non-Magnetic Water Meter Non-magnetic digital water meter



### Production item

- ▶ a remote water meter
- ▶ Freeze-proof water meters
- ▶ a counter-current water meter
- ▶ Dry sweet pack for hot and cold water
- ▶ Digital water meter terminal integrated
- ▶ Prevention of Backflow for Prevention of Freezing Electronic Water Meter
- ▶ a large water meter
- ▶ Stainless Steel Large Water Meter
- ▶ Hot water meter flow meter and water meter
- ▶ Stray built-in union
- ▶ Union pipes for water, nuts
- ▶ Remote meter reading terminal
- ▶ Direct Operation of the Water Pressure Relief Valve
- ▶ Dial Pressure Regulating Decompression Valve
- ▶ An angle-integrated pressure reducing valve for water supply
- ▶ ANGLE VALVE FOR WATER
- ▶ Directly operated angle valve integrated type for water supply

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