

SCALEP®

Water Descaling System

Your Best Scale Prevention Solution



Non-electrical



Non-magnetic



Non-chemical



No Maintenance



Water Activation



10-Year Protection Period



ABOUT US



WELCOME TO SCALEDP

At ScaleDp, we believe that technology has the power to transform businesses and reshape industries. Founded in 2010, we have been at the forefront of innovation, providing cutting-edge solutions that empower our clients to thrive in the digital age.



Water
Quality
ASSOCIATION



Our Expertise and Achievements

With over a decade of experience, ScaleDp has had the privilege of working with a diverse range of industries, such as water heater, commercial building, water boiler, water cooling systems. Our solutions are designed to be adaptable and customizable, catering to the specific needs and challenges of various industries. We work closely with our clients to understand their unique requirements, assess their systems, and provide tailored recommendations to prevent scale formation effectively in the digital age.

Our mission extends beyond scale prevention

It is about empowering industries to thrive. By preventing scale buildup, we enable businesses to operate at peak efficiency, reduce downtime, and optimize their processes. This leads to significant cost savings, improved productivity, and a positive impact on the bottom line.

Together, we can create a world where scale-related challenges are minimized, resources are utilized efficiently, and industries operate sustainably. Join us in our mission to revolutionize scale prevention and build a better future for all.



CATALOGUES

ScaleDp - Limescale Terminator

What is limescale?
DPSE water descaler system

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WD001 / WDM001
Application areas and technical data
Benefits

03-05

Commercial

CM001 / CM002 / CM003
Application areas and technical data
Benefits

06-08

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ID001 / ID002 / ID003 / ID004 / ID005 / ID006 / ID007 / ID008
Application areas and technical data
Benefits

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IG001 / IG002 / IG004
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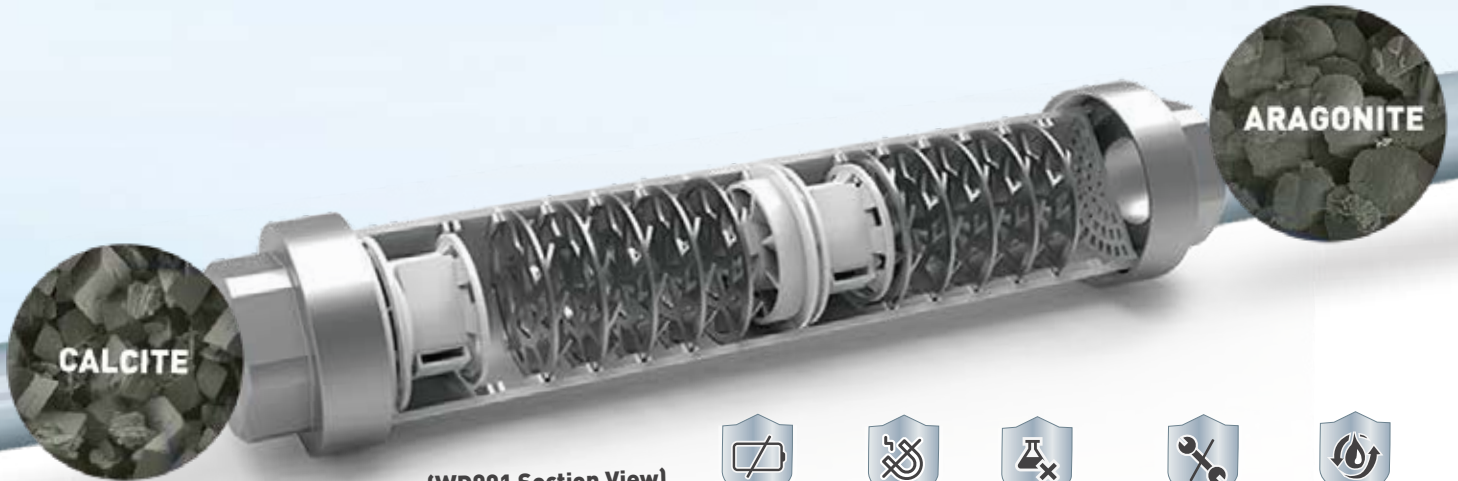
Installation and Application

FAQ - Frequently Asked Questions
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DPSE Water Descaling Systems



(WD001 Section View)



Non-electrical



Non-magnetic



Non-chemical



No Maintenance



Water Activation

The filter element of the DPSE water treatment system is made from a variety of alloy materials, including copper, zinc, and a total of nine different metallic elements, through a high-temperature smelting process. When water flows through the DPSE filter, it releases a large number of free electrons, inducing water molecules to polarize. This transformation polarizes the molecular structure of scale from hard calcite to soft aragonite, causing the scale to detach. The polarized water molecules inhibit the binding of Ca^{2+} , Mg^{2+} , CO_3^{2-} , and OH^- , achieving scale prevention.

- ✓ Effectively remove existing limescale, rust, prevent scaling, inhibit corrosion, prevent rust and inhibit bacteria, enhancing water activity.
- ✓ Enhancing efficiency and reducing energy consumption, reduce carbon emissions.
- ✓ Environmentally friendly and energy-efficient, requiring no electricity, magnetism, or chemicals.
- ✓ Completely eliminates the adverse effects of scale on equipment, appliances, and pipelines.
- ✓ Significantly extends the lifespan of all devices and appliances, including boilers, cooling towers, water heaters, washing machines, heating systems, etc.
- ✓ Certified for prolonged contact with drinking water.
- ✓ Easy to install, boasting a 10-year lifespan with no maintenance costs during operation.
- ✓ Offers various connection options, compatible with pipes of any material or model.
- ✓ Does not impede water pressure in residential, commercial, and industrial applications.
- ✓ Suitable for diverse settings, including recirculating water system, RO system, heating supply system, oilfield gathering and transportation system, homes, bakeries, bubble tea shops, beverage factories, breweries, swimming pools, apartment buildings, hotels, and more.

ScaleDp - Limescale Terminator

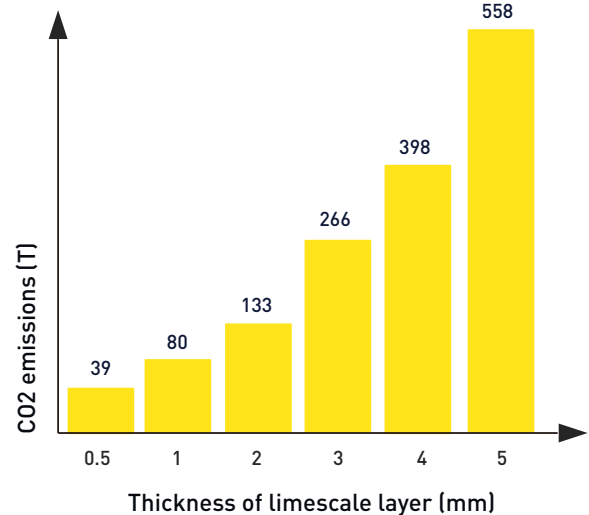
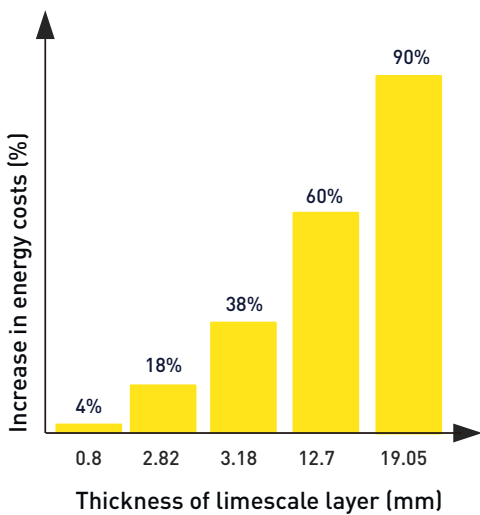
What is Limescale?

Limescale, also known as scale or hard water deposits, is a common problem that occurs when water contains high concentrations of minerals like calcium and magnesium. When water with these minerals is heated or evaporates, the minerals precipitate and form a hard, chalky residue on surfaces such as pipes, faucets, appliances, and fixtures.



The issues associated with water scale buildup include:

- ✓ Increase water flow resistance, reduce velocity, and flow rate.
- ✓ Decrease heat conduction efficiency, increase energy consumption.
- ✓ Reduce equipment operation and production efficiency, shorten lifespan.
- ✓ Contaminate water quality, waste water resources.
- ✓ Increase maintenance and cleaning costs.
- ✓ Corrode pipelines and equipment.
- ✓ Uneven heating, pipeline blockages, with the risk of rupture in severe cases.
- ✓ Increase carbon dioxide emissions.





Whole House Water Descaler



The DPSE system is very effective and is suitable for all types of domestic appliances. For example, washing machines, water heaters, kettles, water supply systems, showers, heating systems, refrigeration and air conditioning equipment



Section View

Hardness

≤450mg/L

PH

3-10

TDS

≤800ppm

Iron

<2mg/L

Recommended water properties

(In a case when water properties are different as recommended, please contact us for individual evaluation)

Application Scenarios

Domestic Boilers, Water Heaters, Washing Machines, Dishwashers, Coffee Machines, Kettles, Showers, Heating Systems, Air Conditioning



water heaters



Enhances heat conduction efficiency
Extend water heater life
Ensure smooth water flow to prevent blockages



washing machines



Increase cleaning efficiency
Reduce soap and detergent usage
Improved Water Flow



coffee maker



Improve coffee flavor
Extend machine lifespan
Maintain brewing efficiency

Benefits



✓ Effectively eliminates bacteria with a removal efficiency of 93% and an antibacterial rate of 99.99%.

✓ Magnetic and electric-free, with zero carbon emissions.

✓ Certified for prolonged contact with potable water.



✓ Extends the lifespan of household appliances.

✓ Environmentally friendly, free from chemicals.



✓ Enhances the cleaning efficiency of soap and laundry detergent.

✓ Built-in vortex water device to enhance chip production efficiency



🕒 Service life **10** years

📊 Efficiency **87%**

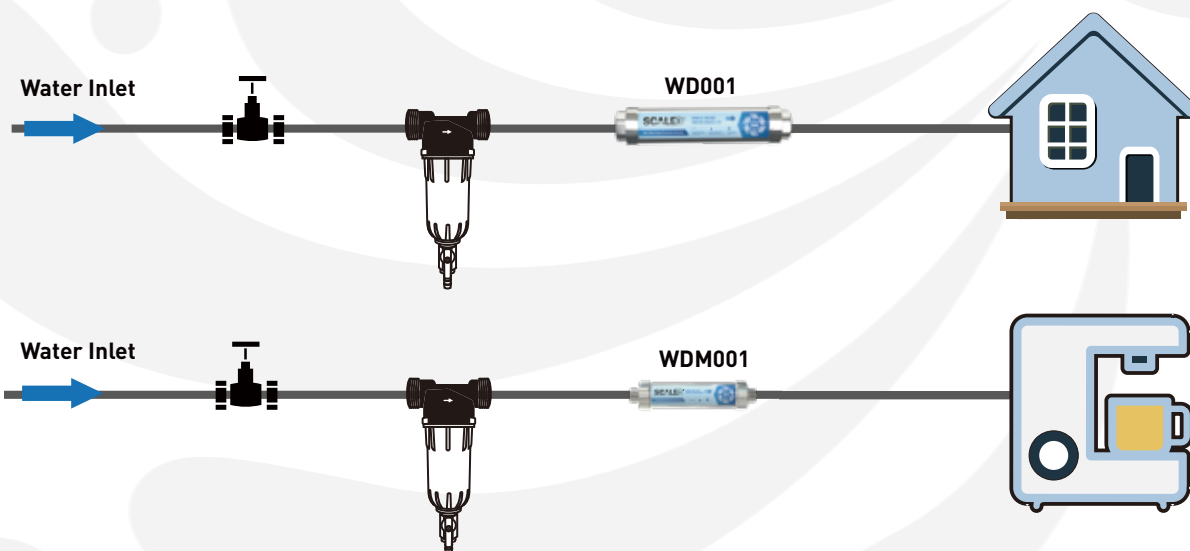
WD001



🕒 Service life **3** years

📊 Efficiency **90%**

WDM001

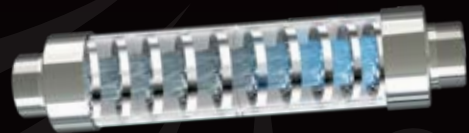




Commercial Water Descaler



The DPSE System proves to be effective and suitable for various applications, including running water plants. Its versatility extends to diverse settings such as washing lines, restaurants, bakeries, laundries, hairdressers, dry cleaners, swimming pools, dairies, distilleries, gardening and more. Additionally, it demonstrates reliable performance in water systems, generators, heating systems, refrigeration, and air conditioning equipment



Section View

Hardness

≤800mg/L

PH

3-10

TDS

≤2000ppm

Iron

< 5mg/L

Recommended water properties

(In a case when water properties are different as recommended, please contact us for individual evaluation)

Application Scenarios



Buildings

Large Commercial Buildings
High Volume Apartments
Central Air-conditioning Systems for Buildings



Production & Manufacturing

Food Processing Plants
Dairy Plants
Breweries



Recreational and Sports Facilities

Public Swimming Pools
Golf and Tennis Clubs
Fitness Centers
Cruise Ships and Maritime Applications



Institutional and Hospitality Sector

Educational Institutions
Medical Facilities
Hospitality Industry (Hospitals, Nursing Homes, Hotels, Resorts, Restaurants, and Cafes)

Benefits



✓ Effectively removes scale with an efficiency rate of up to 92%.

✓ Extend the lifespan of water-based equipment.

✓ Magnetic and electric-free, with zero carbon emissions.

✓ Directly connectable to copper, CPVC, or PVC pipes, and easily adaptable to PEX and other pipe types.

✓ Certified for prolonged contact with potable water.



✓ Provides efficient corrosion prevention with a success rate of up to 95%.

✓ Over 10 years of lifespan, requiring no supervision or maintenance during operation.

✓ Large flow capacity for efficient water treatment.

✓ Environmentally friendly, free from chemicals.



✓ Effectively eliminates bacteria with a removal efficiency of 93% and an antibacterial rate of 99.99%.

✓ Improve production line efficiency, leading to increased overall enterprise capacity.

✓ No impact on building, factory, or production line water pressure.

✓ Simple installation, directly mountable on pipelines.





DPSE Water Descaler



The DPSE descaling system demonstrates unparalleled performance in the industrial sector, catering to various applications such as circulating water systems, desalination systems, and oilfield gathering systems. It can be directly connected to diverse equipment including plate heat exchangers, condensers, oil coolers, air compressors, boilers, cooling towers, geothermal heat pumps, cooling systems, heating furnace pipelines, oil wells, gas wells, and oil pipelines.



Hardness

≤1500mg/L

PH

3-10

Salinity

<10000mg/L

TDS

<200000ppm

Iron

<5mg/L

Recommended water properties

(In a case when water properties are different as recommended, please contact us for individual evaluation)

Application Scenarios



Healthcare & Various Systems

Hospitals
Reverse Osmosis Systems
Water Injection & Steam Injection System Pipelines



Oil and Energy

Oil Exploration
Single Well Oil Collection Pipelines
Oil Wells, Gas Wells, Pumps, and Oil Pipelines



Industrial Processing

Aluminum Industry (Heat Exchangers)
Chemical Manufacturing (Chemical Plants)
Wood Industry (Timber Processing)
Automotive Industry (Automotive Manufacturing)
Food Production (Food Processing)
Maritime and Shipping Industry (Marine and Cargo Shipping)
Textile Industry (Textile Production)
Rubber Manufacturing (Rubber Production)
Injection Molding (Plastic Injection Molding)
Refineries (Refining Processes)
Wastewater Treatment (Wastewater Treatment Plants)
Printing Industry (Printing Processes)



Heat Exchange & Cooling Systems

Cooling Towers
Large Boilers
Plate Heat Exchangers
Heat Source Boilers
Heating Furnace Pipelines
Various Cooling Systems under Different Conditions

Benefits



✓ Effectively removes scale with an efficiency rate of up to 95%.

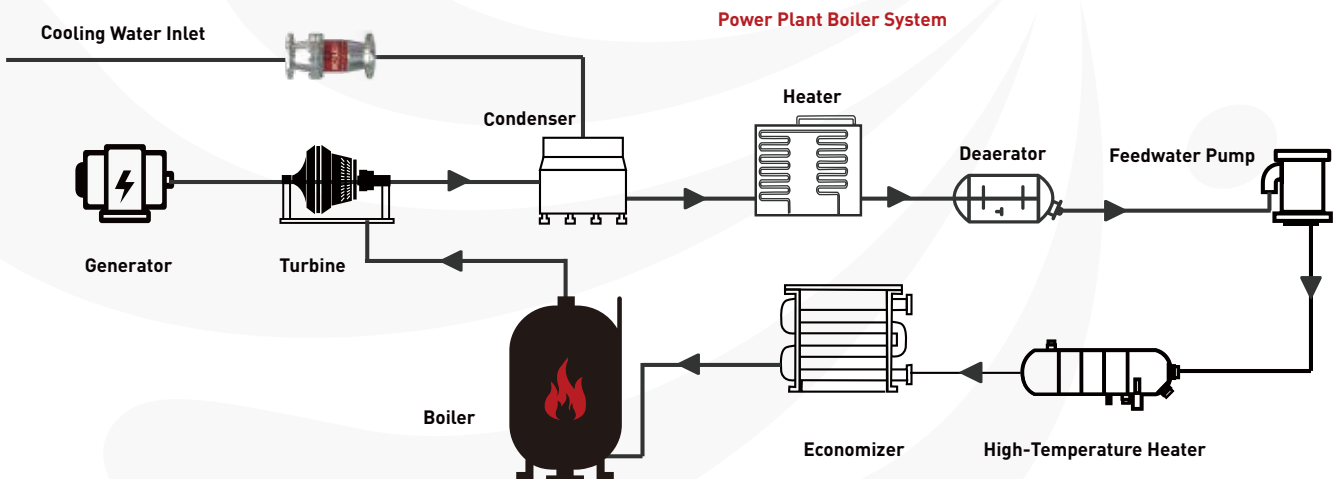
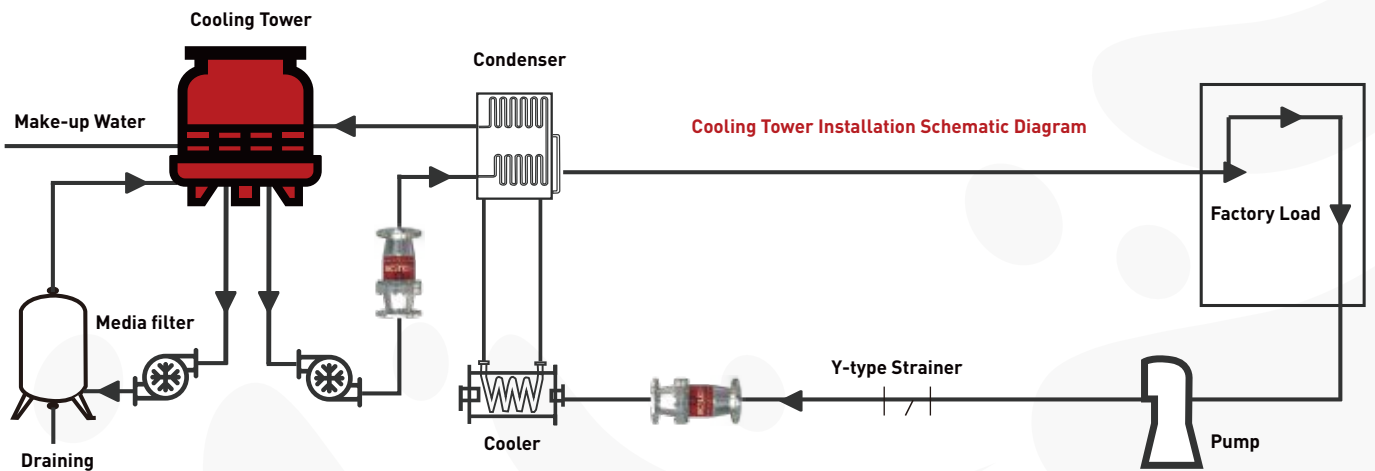
✓ Provides efficient corrosion prevention with a success rate of up to 95%.

✓ Non-magnetic, non-electric, non-chemical, and zero carbon emissions, energy-efficient and environmentally friendly.

✓ Extend the service life of water-based equipment such as boilers, cooling towers, reverse osmosis systems, circulation water systems, seawater desalination systems, and oil field gathering systems, enhancing operational safety.

✓ Improves the efficiency of production lines, oilfield extraction, and other equipment, increasing overall enterprise capacity.

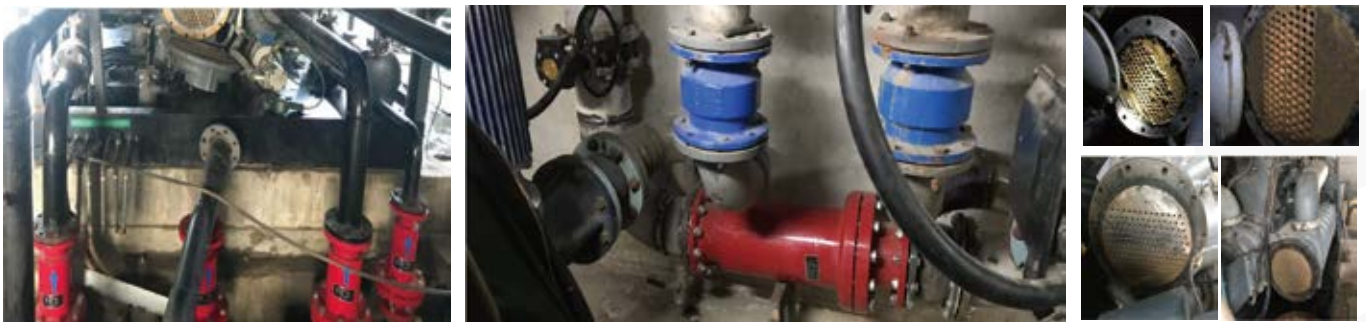
✓ Customizable reinforced models available for enhanced performance in challenging water quality or environmental conditions



Installation Cases



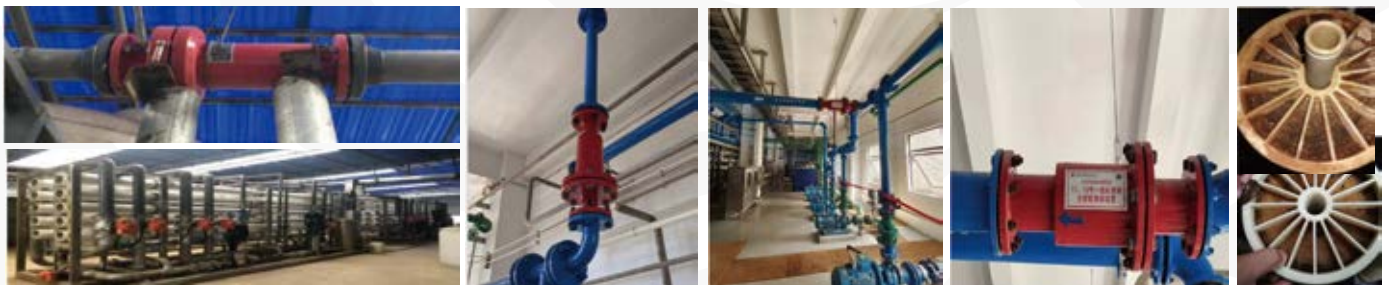
Oilfield



Cooling circulating water system



Heating systems



RO system



DPSE Water Descaler

ScaleDp's research team has conducted numerous trials to assess the application of activated water through the DPSE system in various agricultural settings, including both indoor and outdoor field environments.



Application Scenarios



Landscaping and Recreational Spaces

Garden
Park
Football Field
Golf course
Plant Nurseries



Water Cultivation

Hydroponics
Fruit and Vegetable Cultivation
Water Planting



Agricultural Facilities

Irrigation Systems
Drip & Sprinkler Systems

Benefits



✓ Stimulation of Biological Cell Activity and Increased Seed Germination Rate

✓ Improved Taste of Fruits and Increased Nutrient Content



✓ Promotion of Plant Growth and Reduction of Growth Cycle Duration

✓ Enhanced Soil Environment Leading to Reduced Fertilizer Usage

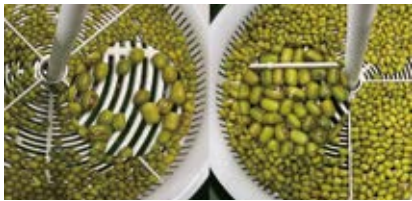


✓ Enhancement of Cellular Antioxidant Properties, Improved Plant Resistance, and Reduced Pesticide Usage

Water Activation In Farm Irrigation

The DPSE water treatment system has shown remarkable effectiveness in enhancing water activity, restoring water to its initial state, and effectively improving the environment for plant growth

The first day



Standard water

Water Activation

The third day



Standard water

Water Activation

The fifth day



Standard water

Water Activation

The test results have demonstrated the distinctive ability of the DPSE water treatment device in structuring water. Feedback from crop cultivation has provided the following confirmations:



Water Activation

Standard water



Models and Sizes

ScaleDp Residential

DPSE SCALEDP Model	Nominal Diameter	Connection	Diameter (mm)	Length (mm)	Weight (kg)	Max Flow (m ³ / Hour)	MinFlow (m ³ / Hour)	Recommended Flow (m ³ / Hour)	Max Pressure (Bar / Mpa)	Temp (Ambient °C)
WDM001	DN15	G1/2"	Φ37	160	0.43	2	0	1.3	<1.0	5-180
WD001	DN20 DN25	G3/4" G1"	Φ 54	255	0.95	4	0.6	3	<1.0	5-180

ScaleDp Commercial

DPSE SCALEDP Model	Nominal Diameter	Connection	Diameter (mm)	Length (mm)	Weight (kg)	Max Flow (m ³ / Hour)	MinFlow (m ³ / Hour)	Ambient Temp(°C)	PressureLevel (LB)	Preset Pressure/ Pressure Drop (bra)
CM001	DN32	11/4" Thread	Φ62	320	2.5	8	1.45	0-280	≤ 150	10/0.1
CM002	DN40	11/2" Thread	Φ72	420	3.9	10	2.26	0-280	≤ 150	10/0.1
CM003	DN50	2" Thread	Φ 100	430	5.8	20	3.53	0-280	≤ 150	10/0.1

ScaleDp Industrial

DPSE SCALEDP Model	Nominal Diameter	Connection	Flange Thickness (mm)	Flange Bolt Hole * Qty (d * n)	Diameter (mm)	Length (mm)	Max Flow (m ³ / Hour)	Min Flow (m ³ / Hour)	Recommended Flow (m ³ / Hour)	Max Pressure (Mpa)	Temp (Ambient °C)
ID001	DN32	Flange	18	Φ18*4	Φ140	390	8	1.4	4	1.6	5-280
ID002	DN40	Flange	18	Φ18*4	Φ150	410	12	2	7	1.6	5-280
ID003	DN50	Flange	19	Φ18*4	Φ165	430	20	3.5	10	1.6	5-280
ID004	DN65	Flange	20	Φ18*8	Φ185	450	35	6	18	1.6	5-280
ID005	DN80	Flange	20	Φ18*8	Φ200	470	50	9	27	1.6	5-280
ID006	DN100	Flange	22	Φ18*8	Φ220	490	80	14	42	1.6	5-280
ID007	DN125	Flange	22	Φ18*8	Φ250	510	120	22	66	1.6	5-280
ID008	DN150	Flange	24	Φ22*8	Φ285	530	180	32	95	1.6	5-280

ScaleDp Agricultural irrigation

DPSE SCALEDP Model	Nominal Diameter	Connection	Diameter (mm)	Length (mm)	Weight (kg)	Max Flow (m ³ / Hour)	MinFlow (m ³ / Hour)	Ambient Temp(°C)	PressureLevel (LB)	Preset Pressure/ Pressure Drop (bra)
IG001	DN20 DN25	G 3/4" G 1" (female) Garden Hose Quick Connector	Φ54	255	0.95	4	0.6	0-280	-	-
IG002	DN32	11/4" Thread	Φ62	320	2.5	8	1.45	0-280	≤150	10/0.1
IG003	DN40	11/2" Thread	Φ72	420	3.9	10	2.26	0-280	≤150	10/0.1
IG004	DN50	2" Thread	Φ100	430	5.8	20	3.53	0-280	≤150	10/0.1

Frequently Asked Questions

Does ScaleDp® affect the taste of water? ScaleDp® does indeed "improve" unpleasant tastes like chlorine, thereby enhancing the overall taste of water. Some experts in the field of physical water treatment believe that these tastes have been transferred to precipitated solids.

How effective is ScaleDp® for hot water systems? Very effective. ScaleDp® is becoming the preferred choice for protecting hot water systems from corrosion. We offer various models for different hot water circulation systems to achieve optimal performance.

How do you verify the effectiveness of ScaleDp® after installation? After installation for a period, observe changes in pressure and flow before and after in boilers and pipes (equipment) to determine effectiveness. The removal of scale increases the flow area, reduces pressure, and consequently minimizes flow loss. Alternatively, you can open the equipment for inspection (recommended after one month of installation).

Is it necessary for ScaleDp® to be installed on the main water line? Not necessarily; generally, we recommend installation on branch pipes for targeted protection of individual devices or water routes.

What is the operating temperature range for ScaleDp®, and can it function in cold weather? ScaleDp® can work at any temperature, provided water flow remains normal (no freezing). In cold weather, it's advisable to add insulation to your pipes or equipment.

How is the dislodged scale expelled? After detachment, the solidified scale appears in block or granule form in the water flow, necessitating prompt cleaning of the filter and clearing of the water outlet.

Does ScaleDp® alter the composition of water? No, it won't. The DPSE system just prevents the binding of Ca^{2+} and Mg^{2+} with CO_3^{2-} and OH^- , leaving minerals retained in the water.

Does ScaleDp® soften water? No, it won't, and it won't alter water hardness.

How soon after installation does ScaleDp® start descaling, and at what rate? It starts working 72 hours after installation. Depending on the series, descaling duration varies: typically 7-15 days for residential, 30-45 days for commercial and industrial. In environments with severe scaling, descaling duration may increase.

Why choose ScaleDp® over chemical treatments? Chemical methods are gradually losing market share due to their addition of harmful pollutants to groundwater. For example, some major industrialized countries have now banned the use of phosphates in laundry powder production because they promote the growth of algae and other oxygen-consuming organisms, leading to stagnation in lakes and rivers. Even water softeners can increase the total sodium content in drinking water. The cost of chemical treatment is high and environmentally destructive, posing health and safety issues. For a more detailed comparison, please refer to "ScaleDp® xx 00-00."

How to choose the right ScaleDp®? Tell us about the operating environment of your equipment (water quality, pipe diameter, contact with drinking water, scale accumulation level, etc.) and the problems you need to solve/prevent, and ScaleDp® will tailor an exclusive descaling solution for you.

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20+
patents

annual production
2000000+
pcs

Factory area
14000+