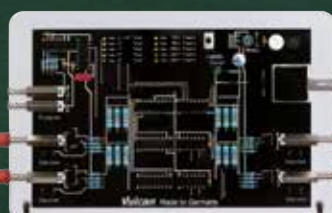




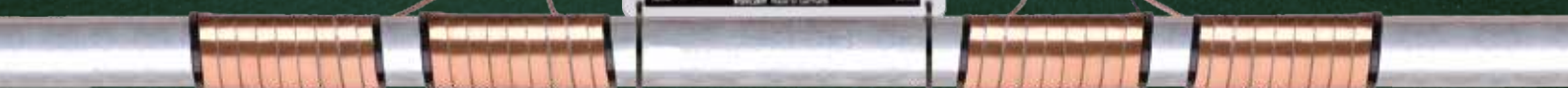
The Eco-Friendly Anti-Scale System For Large and Complex Buildings



**Salt-Free
Chemical-Free
Magnetism-Free**



**MADE IN
GERMANY**





The eco-friendly alternative to water softeners

Managing a large building demands constant observation of all technical equipment, sanitary areas, outdoor areas, etc.

Vulcan helps to improve manageability, sustainability and profitability in many areas.

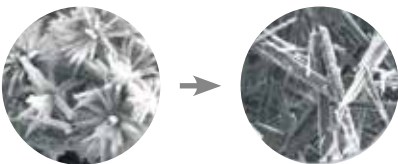
Vulcan ensures all appliances which come in contact with water will obtain their maximum life expectancy as well as significantly reducing their maintenance requirements.

- ✓ **Maximizes the working life of machinery and equipment**
- ✓ **Reduced limescale deposits in the piping system**
- ✓ **Less time and effort required for equipment maintenance**
- ✓ **More efficient use of water heaters and boilers**
- ✓ **Chilled systems and cooling equipment work more efficiently**
- ✓ **Savings in chemicals and cleaning time for cooling towers**
- ✓ **Faster and easier cleaning of kitchens and bathrooms**
- ✓ **Reduced need for cleaning agents and chemicals**
- ✓ **Sprinklers and irrigation systems stay clean longer**



1st Vulcan effect

Vulcan modifies the structure of the calcium crystals



2nd Vulcan effect

Vulcan reduces limescale deposits in the piping system



3rd Vulcan effect

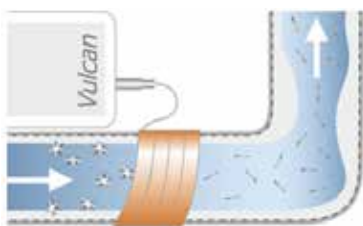
Vulcan produces a protective metal-carbonate layer



The green solution against limescale and rust

Vulcan gently reduces already existing deposits in the piping system. The scale build-up process is reversed and the pipes gradually become cleaner again. This take-out process will not block up your pipes or drain because the treated crystals are microscopic in size and will washes away with the water.

The Vulcan-Impulse-Technology



The Vulcan-Impulse-Technology treats the water with special electronic impulses that take away the adhesive power of the

scale particles. Scale components are simply washed away with the water as a fine powder. In addition, the electronic Vulcan impulses generate a metal-carbonate protective layer that prevents pitting corrosion.





Prevents scale and rust

- ✓ Reduction of existing limescale in piping systems
- ✓ Eco-friendly solution without salt or chemicals
- ✓ Installation without cutting the pipe
- ✓ Works on all pipe materials
- ✓ Long life – fully cast in acrylic
- ✓ 100% maintenance-free

High quality standards



- ▶ Manufactured by Christiani Wassertechnik (CWT) – Made in Berlin, Germany
- ▶ More than 40 years of experience in physical water treatment
- ▶ Successful in more than 70 countries worldwide



Application examples

Office Buildings	Airports	Factories	Swimming Centers
Data Centers	Condominiums	Sports Centers	Theaters
Shopping Malls	Educational Buildings	Heating Systems	Laundries
Hotels & Spas	Exhibition Centers	Cooling Systems	Restaurants
Hospitals	Warehouses	Camping Grounds	many more

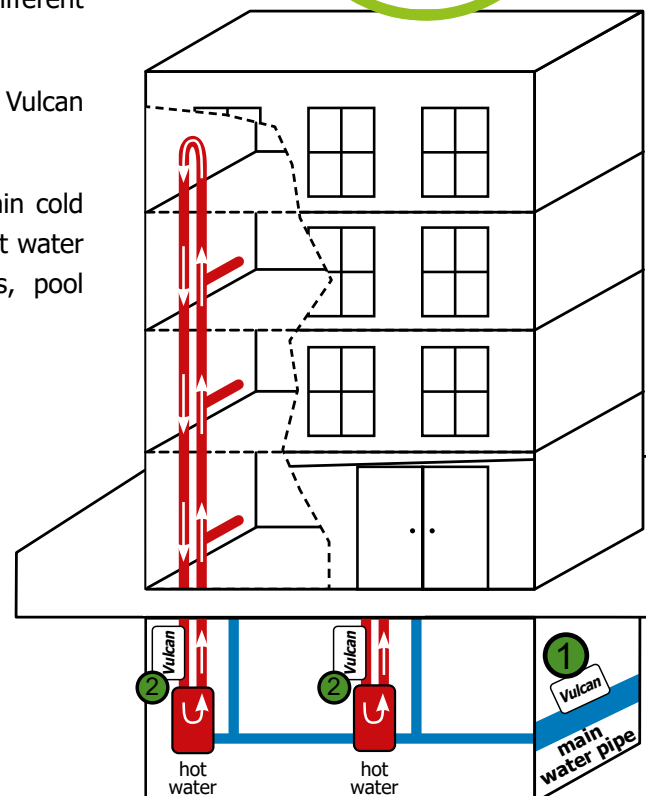


How to install Vulcan in large buildings

In larger buildings there are always different areas to consider.

Below is an example of a typical Vulcan installation in a large building.

Installation areas are often the main cold water supply (1), one or several hot water circulations (2), irrigation systems, pool operations, etc.



Requirements


The iron/metal content should best not exceed 1 ppm and manganese should be below 0.1 ppm.


Vulcan works best with heating element surface temperatures of max. 203°F (95°C). Higher levels or temperatures might hinder the treatment strength in some cases.

DUO TOWERS PARIS

Installation details

Application: Duo Towers in Paris, France

Models:  **Vulcan S25**
Installed in tower 1
at the main cold water line

 **Vulcan S50**
Installed in tower 2
at the main cold water line

Results: The towers were new built before few months. The Vulcan units treat the water supply lines of both towers. Until now they did not have any limescale issues.

Installer: CWT Preval France



References

The Duo Towers are two skyscrapers located in Paris.

Tower 1: 180 m high, 39 levels, 69,000 m² of offices, auditorium, restaurant and shops.

Tower 2: 125 m high, 29 levels, 19,000 m² of offices, corporate restaurant, shops, hotel with 139 rooms, restaurant and panorama bar.



www.vulcan-france.fr

CWT Preval France · 2 Rue de la Gare · 72170 Beaumont Sur Sarthe · France

SCIENCE PARK OFFICE BUILDING

Installation details

Location: Science Park Office Building
Budapest, Hungary
www.sciencepark.hu

Model/Area: A **Vulcan S50** on the main inlet supply of **Building A**, that is bigger and contains a 200 pers. restaurant.
A **Vulcan 5000** on the junction of **Building B**, due to the length of the pipeline.

Purpose: Previously, ion-exchange water softeners (salt-based) had been used to keep the whole piping system and the heating system clean.

There was a problem with the unit's dosing device. The sewage works regularly controlled the salt content of the wastewater and found that the salt content was too high.

As a result, the owners had to pay a heavy price, while they had to solve the water problem in a smart way.

Result: After installing the Vulcans for **8 weeks**, the high salt problem has gone, Vulcan doesn't need salt or any chemical.

The tenants of the building reported to the facility manager that drinking water became tastier and they are absolutely satisfied with this change.

Installed by: VARÁZSMAG Kft



Vulcan S50 was installed on the main inlet of Building A.



Science Park is a Class A office building. The office complex was built in two phases – Building A and Building B - and each phase has 3 wings, which can be interconnected. Both buildings offer efficient floor plates suitable for both open plan and cellular layouts.



ZHAOLIN OFFICE BUILDING

Installation Details

Location: Zhaolin Plaza A and B office buildings
www.zhaolin.cn

Model/Area: One Vulcan S500 in Building A and one in Building B. Both units were installed in the central air-conditioning circulating water system.

Water quality: Water conductivity of the make-up water is 270 uS/cm

Water quality of the cooling tower at 2 months of Vulcan installation:

Conductivity 3680 uS/cm, Total hardness 672 mg/L, Total alkalinity 298 mg/L, Calcium 204 mg/L

Water quality of the cooling tower at 5 months of Vulcan installation (no water blow-down):

Conductivity 6630 uS/cm, Total hardness 2250 mg/L, Total alkalinity 346 mg/L, Calcium 346 mg/L

- Result:
1. Vulcan completely replaces the chemical scale and corrosion inhibitor.
 2. Even with conductivity up to 6630 uS/cm, total hardness up to 2250 mg/L, and concentration ratio up to 20 times or more, the approaching temperature remains stable, significantly reducing wastewater discharge.
 3. The scale of the cooling tower packing has fallen off and no new scale has been seen.

Installed by: Beijing Vulcan Water



Zhaolin Plaza is located in the core business district of Beijing Economic-Technological Development Area, and it consists of two office buildings, with a total construction area of 138,000 square meters, 25 floors above ground and 3 floors underground, and a height of 108.6 meters.

Coca-Cola

Two weeks after Vulcan was installed, lots of limescale deposits had disappeared in the pipe.

Vulcan S500 in Building A



Vulcan S500 in Building B



www.vulcan-beijing.com

Installation details

Location: Energy Complex Co., Ltd. (EnCo)
Bangkok, Thailand
www.energycomplex.co.th

Models: 1 x Vulcan S250
1 x Vulcan X-Pro 1

Area: Before the condenser water piping system to treat all 7 cooling towers

Installed by: SGI Technology / Globen Engineering

About Energy Complex

Energy Complex is the first office complex in Thailand and Southeast Asia to be awarded the highest level of Platinum Green Building certification from LEED (Leadership of Energy and Environmental Design) that serves as the prototypical building in Thailand for energy conservation, harmonious coexistence of industry and the environment and optimal utilization of resources.

Installation purpose

Before Vulcan was installed, the client used ozone water system to treat the condenser, but they still found massive scales in the basin of the cooling towers. They collected the scales from the basins and weighed them, there were around 150 kg (average) of scales every month.

The results after 4 months

Vulcan was added together with the ozone system to treat the water. After 4 months, the approach temperature of the chiller has been reduced, so that the energy has been saved from the machine. Also, the scales from the cooling tower basin have been reduced.

You can find more than 400 additional references at:

www.cwt-vulcan.com



Vulcan S250 and X-Pro 1 were installed on the main return pipes of the condenser.



7 cooling towers were treated with Vulcan.



SGI Technology / Globen Engineering | (+66) 2004 6681 | www.vulcan-thailand.com





Shopping Mall
FAN Mallorca
www.fanmallorca.com

Carrefour
Carrefour Hypermarket
www.carrefour.com

Location: FAN Mallorca Shopping Center;
Carrefour Hypermarket,
in Palma de Mallorca, Spain

Model: 1 x S500 Vulcan
2 x S100 Vulcan

Area: The eco-friendly Vulcan System is installed on the cold water pipe with Ø 110 mm upstream of the water tank and on the cold water pipe with Ø 110 mm after the water tank. Also on second holding tank Ø75mm.



Purpose: The installation of Vulcan is intended to protect the pipes and appliances from limescale and extend their service life. Vulcan should also help keep the water infrastructure intact.

Result: After the use of the Vulcan Anti-Scale System, the quality of the water is optimised, ensuring greater comfort and satisfaction for the customer.

Installer: www.aguaris.com



The **FAN Shopping Center** is one of the largest shopping centers in the city and offers a wide range of stores and services. From fashion to technology, from entertainment to food and a Carrefour Hypermarket, there is a variety of stores to suit every taste and interest.

AGUARIS sostenible S.L. | Distribuidor exclusivo de Vulcan en Islas Baleares e Islas Canarias



References



4-Year Field Tested of Vulcan for the Cooling Tower at Supermal Karawaci (SMK)

Installation details

Model S500

Tested field Supermal Karawaci, Tangerang, Indonesia

Operating times This large mall operates 7 days a week from 9:30 to 21:30, 365 days of the year

Tested location One of 7 cooling towers servicing the mall's water cooled package air-conditioning systems. The cooling tower selected is a 408TR system containing 45 m³ water volume with a water flow rate of 318 m³/h in an open circuit system.

Testing period February 2014 - February 2018 (4 Years)

Installed by PT Biosolutions Indonesia



Vulcan S500 was located inside aluminum box and installed on a cooling tower main pipe.

Inspections during the 4 years: 10 times



First Inspection: March 4, 2014.

The heat exchanger tube plates were removed to reveal the inside surface of the copper tubes. Since these tubes had recently been manually cleaned, virtually no scale was present, as is on this photo.



Last inspection: February 12, 2018 at the end of the 4-year trial

The inside surfaces of the copper tubes show zero additional scale formation after 4 years in the test period.

The photographs show that the refrigeration condenser tubes, from the beginning to the end of the trial period, were "as clean as new".

Please note that for 4 years of 365 days continuous operation, there has been:

- No chemical water treatment.
- No bleed off of waste water.
- No cleaning of condenser tubes.
- No water treatment specialists employed.
- Copper tubes in the condensers stay very clean – without scale.
- No cleaning of the cooling tower inside surfaces.

Summary of Benefits:

- Large savings on **chemicals**. The complete elimination of chemicals in this cooling tower operation during the field test supports the fact that Vulcan is "eco friendly" and would meet the Leeds and Green Mark Building Criteria required for "Green Building" designation anywhere in the world. Enjoy the benefits of a world class, **sustainable and "Green" Cooling Tower!**
- Huge savings on **blow down** water consumption. Significant energy and water savings due to clean condenser tubes and no need for water blow downs below electric conductivity 10,000 µS/cm levels with the electronic cooling tower water treatment system – representing alone a saving of virtually all previously wasted water due to blow downs.
- Savings on **payroll** – no operational stoppages required for condenser cleaning, less testing and fewer inspections needed.
- Savings on **supervision** – engineers appreciate the "set and forget" of this automatic water treatment system. Frequency of inspections and laboratory expenses for cooling tower water testing are reduced due to the safety and reliability of the electronic systems.
- Scale formation was eliminated. Refrigeration compressors operated at peak efficiency due to no scale in the condensers.
- Rust prevention in iron pipes is an added benefit of the Vulcan system.

Installation details

Location: The Be'er Sheva Grand Mall
myofer.co.il

Model/area: Vulcan S250 x 4 units for 4 cooling towers

Problem: Each cooling tower has 2 heat exchangers.
The difference in pressure increased between the inlet and outlet of the heat exchanger, which showed a developing blockage.
The heat exchangers had lost in work capacity every month due to the multiplicity of scale and rust.

Result: 5 months after installation, there are no scale issues in any cooling tower heat exchanger systems.
Due to the excellent results, more Vulcan will be installed for the rest of the company's facilities in Israel.

Installed by: EYE-IN ELECTRONICS



The Be'er Sheva Grand Mall

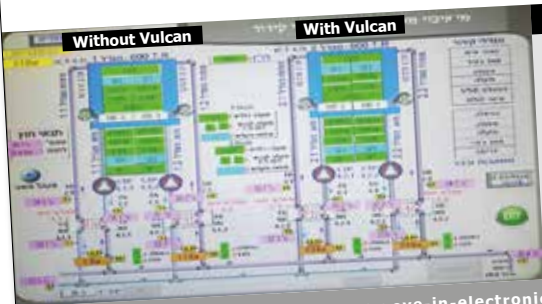
The Be'er Sheva Grand Mall is the largest shopping mall in the southern region of Zion, located in Be'er Sheva - the capital of the Negev. It features 220 stores.



After 3 months, scale deposits had been removed on the heating element and there was no sign of new scale deposits.



Vulcan S250 outdoor installation: on the roof, with the sun most of the year. The temperature at this time was 38 - 40 °C. In winter, it is rainy and the wrap should be sealed to IP-68. Vulcan impulse bands were well wrapped and the Vulcan unit was in the outdoor box.



The result after 5 months installation:

- On the right is a cooling tower with Vulcan.
The differences are clear:
- 1. The **pressure difference is lower** between the exit and the inlet of the heat exchanger in the right tower.
 - 2. The water coming out of the heat exchanger is **colder** in the right tower.



Marina Plaza

About Marina Plaza

A prestigious office location, just off Interchange No 5 on Sheikh Zayed Road, Marina Plaza forms part of the Dubai Marina Mall and Address Marina Hotel complex. The building has 165 inspiring office spaces for businesses; as well as five retail units. The location is perfect for occupiers to enjoy the nearby facilities of the marina in their spare time and the two metro stations, Damac Properties and Jumeirah Lakes Towers, are ideal for commuters.



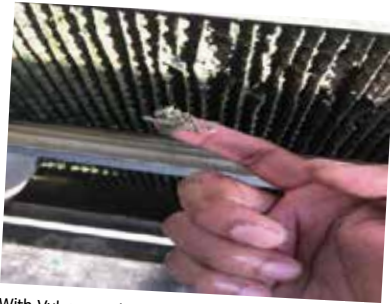
Area: Main water pipe for cooling towers
Installed by: Ascadi Green Building Services LLC



VULCAN S500 was installed on the return condenser waterline.

Benefits from Vulcan S500:

- ✓ Reduced chemical dosing and chemical costs. The dosing of scale inhibitor chemical was reduced from the initial 6 liters per day to 1 liter per day.
- ✓ Reduced scale formation.
- ✓ Loose and easily removable scale on cooling tower fills. Man power is reduced due to easy maintainability.
- ✓ Reduced AMC (annual maintenance contract) cost.



With Vulcan, scale becomes loose.



Scale and algae can be removed easily by a water gun.

You can find more than 400 additional references at:
www.cwt-vulcan.com



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+971 (04) 431 0449

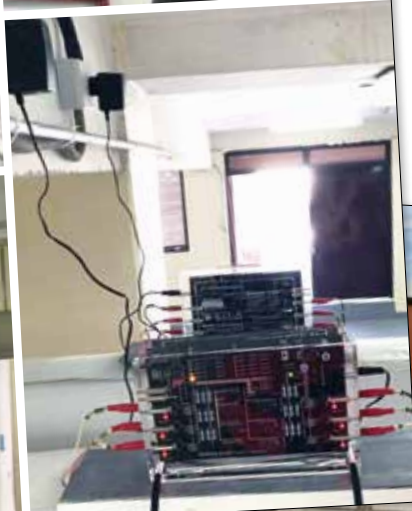
info@ascadigbs.ae
www.ascadigbs.ae



Prince Faisal bin Fahd Stadium

Prince Faisal bin Fahd Stadium in Riyadh, Saudi Arabia is using four Vulcan S100 equipments to treat the closed loop chilled water system. Since 8 years with Vulcan no chemicals are used.

Installed by:
Wroodsham for Trading & Contracting Est.



References



Średzki Water Park in Środa Śląska, Poland

The water treatment system Vulcan S25 protects the entire water supply network and all the heating devices of the pools of the Średzki Water Park.


The costs of normal treatment products with such a water flow of 25 m³/h would mean operating costs at 3.900 € per month (assuming 24 working per hour)! The cost of running the Vulcan S25 device is approx. 1,50 € per month.





Shougang Ice Hockey Arena

Installation details

Location:	Shougang Ice Hockey Arena
Area:	The inlet of the water heater
Pipe:	DN100
Model:	 Vulcan S25
Purpose:	To solve the scaling problems of the water heater, and wish to extend the cleaning time and improve the efficiency
Installed by:	Beijing Vulcan Water

About Shougang Ice Hockey Arena

As the 2022 Beijing Winter Olympics venue, Shougang Ice Hockey Hall is the key construction project of Winter Olympics. It will become one of the most professional and advanced stadiums in China for international and national competitions.



was installed in front of the heat exchanger to solve problems in heat exchangers, pumps, water heaters and the whole heating system.



Both sides of the picture are water inlets. The Vulcan unit was installed in the water inlet of the water heater.

You can find more than 400 additional references at:
www.cwt-vulcan.com

Hilton

Vulcan is installed to solve the limescale problem of the central air conditioning system without salt or chemicals.



PARIS COUNTRY CLUB

Vulcan installed at:

Paris Country Club
59 Rue Jean-Baptiste Pigalle
75009 Paris
France

Installed by:

CWT Preval France
www.cwt-international.com

Model:

Vulcan S100

The Paris Country Club

The course is located just 10 minutes from Paris in the heart of the Saint-Cloud race course. The Paris Country Club has a 9 hole golf course, driving range, 3 separate swimming pools, tennis courts, full gym, cinema, spa and massage area as well as a full restaurant.

Application:

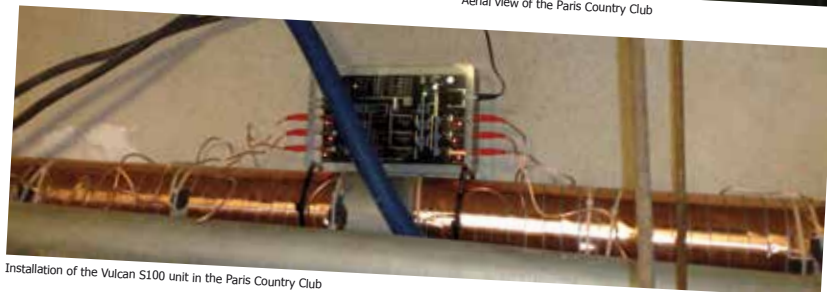
The Vulcan S100 unit was installed on the water main for the Clubhouse, to protect the bathrooms and kitchen areas from limescale deposits.



Vulcan S100 Anti-Scale System



Aerial view of the Paris Country Club



Installation of the Vulcan S100 unit in the Paris Country Club

HANNAH'S CLEANERS LAUNDRY



Installation Details

Location: Vulcan Antiscale System installed at a commercial laundry in San Antonio Texas.

Vulcan Model:  Vulcan S25



Installed by: Techno Mechanical



Purpose

The system was installed to prevent limescale build-up inside the boiler, thereby enhancing its operational efficiency.

The objective is to enhance efficiency and streamline the annual cleaning process.

Results:

The obsolete saltwater softener was removed and several modifications were made to the pipe system.

Despite the passage of a year, the customer continues to be satisfied with the Vulcan system and has recently contacted us to enquire about acquiring an additional system for her residence.

Vulcan has been installed for the new boiler. The removal of the water softener will also facilitate the annual cleaning process.



References



www.sdis61.fr

Model: Vulcan S10

Location: SDIS 61 Department of Fire and Rescue
Rue Philippe Lebon
61000 Alencon
France

Installed by: CWT Preval France



Headquarters of Department of Fire and Rescue for Orne

SDIS 61 Department of Fire and Rescue

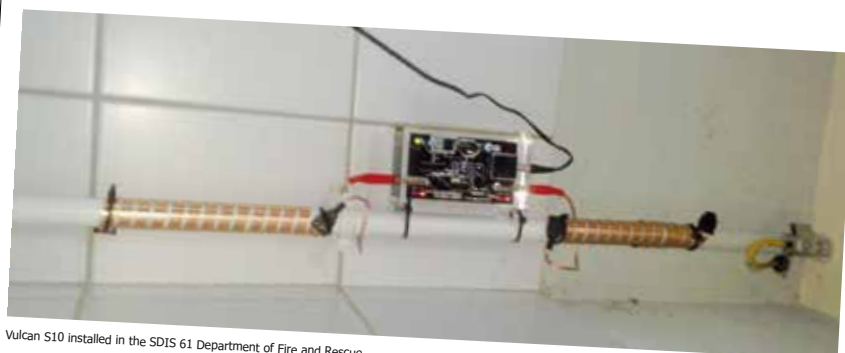
The headquarters for the Department of Fire and Rescue SDIS 61 was established September 2001, in a former industrial complex. The SDIS 61 Fire and Rescue Department is the single framework responsible for the organization and management of fire and emergency services for Orne.



Firefighter training school



Vulcan S10



Vulcan S10 installed in the SDIS 61 Department of Fire and Rescue

Installation Details

Location: Marigot Vietnam LLC
(A company of Swarovski Group)
www.swarovski.com

Area:
- Cooling towers
- Process water
- Water supply

Model:
6 x Vulcan S500
1 x Vulcan S10
3 x Vulcan S25
2 x Vulcan S100
2 x Vulcan S500

Installed by: Chuc Hien Dat

Before Vulcan

1. Cooling towers: chemical dosing was necessary.
2. Process water pipes: cleaned every 3 months by chemical.

Vulcan Effect

1. Cooling tower and chiller system: after Vulcan S500 has been installed for 1 year, the condenser approach temperature < 2°.
2. Cooling tower: after installing Vulcan, we still keep the chemical dosing system and check the water monthly. We reduce chemicals every month. After 6 months with Vulcan, the chemicals have been greatly reduced more than 80%.
3. Process water pipes: no need to clean every 3 months. The client has never cleaned by far with Vulcan.



S500 for the chiller



Impulse bands covered by pipe insulation



S10 for the process water pipe



S25 and S100 for the water supply



V5000 for the process water pipes



S500 for the cooling towers

SWAROVSKI

is a crystal producer headquartered in Austria. Swarovski has been a family-owned business since it was founded in 1895 by Daniel Swarovski.

Marigot Vietnam LLC

is part of the Swarovski Crystal Business, which represents the largest area of business for the Swarovski Group. Marigot Vietnam LLC manufactures jewelry and fashion accessories.

www.vulcan-vietnam.com



You can find more than 400 additional references at:

www.cwt-vulcan.com

Installation details

Location: Police Academy (Beijing)

Area: Before the water heater of the employee bathroom

Model: 1 x Vulcan S10

Purpose: It is a hot water system renovation project.

In order to solve the scaling problems of the water heaters: to prolong the cleaning time, to improve the operating efficiency, to save gas cost, to keep the pipeline system clean and to solve the scaling problem of shower nozzle.



Vulcan S10 was installed in front of the water heater.



Volksbühne Theater Berlin


www.volksbuehne.berlin



INSTALLATION LOCATION

Volksbühne Theater in Berlin, Germany

MODEL SIZE & INSTALLATION AREA

 Vulcan S50 is installed on the main water pipe

PURPOSE

Solving problems with hard water in the pipe system and in the in-house laundry.

RESULTS

After a 6-week Vulcan test, management is satisfied with the results of Vulcan water treatment, and the laundry also has better washing results.

INSTALLER

1st SELECTION Chemical-free systems, www.1st-selection.eu

ABOUT THE THEATER

The Volksbühne is a theater in the centre of Berlin.

The stage was built in 1890. The auditorium has three tiers with 800 seats.



Vulcan S50 is installed on the main water pipe.



Models and Sizes

	Vulcan Model	Max. pipe diameter	Max. capacity	Voltage	Wattage	Impulse Bands	Dimensions	Frequency range	Required Space	Programs
Residential Line	3000 	1½" (~ 38 mm)	3000 l/h (13 gpm)	48 Volt	2.2 Watt	2 x 1 m (~ 2 x 39") 10 mm (~ 0.4")	125/80/30 mm (4.9/3.1/1.2")	3-32 kHz	~ 250 mm (~ 10")	1
	5000 	2" (~ 50 mm)	8000 l/h (35 gpm)	48 Volt	2.2 Watt	2 x 2 m (~ 2 x 79") 10 mm (~ 0.4")	150/90/30 mm (5.9/3.5/1.2")	3-32 kHz	~ 350 mm (~ 14")	1
Commercial Line	S10 	3" (~ 76 mm)	15 m³/h (65 gpm)	48 Volt	2.5 Watt	2 x 3 m (~ 2 x 118") 20 mm (~ 0.8")	190/120/40 mm (7.5/4.7/1.6")	3-32 kHz	~ 500 mm (~ 20")	3
	S25 	4" (~ 100 mm)	30 m³/h (130 gpm)	48 Volt	2.5 Watt	4 x 3 m (~ 4 x 118") 20 mm (~ 0.8")	200/130/40 mm (7.9/5.1/1.6")	3-32 kHz	~ 800 mm (~ 32")	5
	S50 	5" (~ 125 mm)	70 m³/h (300 gpm)	48 Volt	2.5 Watt	4 x 4 m (~ 4 x 13' 2") 20 mm (~ 0.8")	200/130/40 mm (7.9/5.1/1.6")	3-32 kHz	~ 900 mm (~ 35")	5
	S100 	6" (~ 150 mm)	120 m³/h (530 gpm)	48 Volt	2.7 Watt	6 x 4 m (~ 6 x 13' 2") 20 mm (~ 0.8")	230/150/40 mm (9.1/5.9/1.6")	3-32 kHz	~ 1200 mm (~ 47")	10
Industrial Line	S150 	8" (~ 200 mm)	180 m³/h (790 gpm)	48 Volt	2.7 Watt	6 x 8 m (~ 6 x 26' 3") 20 mm (~ 0.8")	230/150/40 mm (9.1/5.9/1.6")	3-32 kHz	~ 1800 mm (~ 71")	10
	S250 	10" (~ 250 mm)	350 m³/h (1540 gpm)	48 Volt	3.0 Watt	8 x 10 m (~ 8 x 32' 9") 20 mm (~ 0.8")	280/200/50 mm (11.0/7.9/2.0")	3-32 kHz	~ 2500 mm (~ 99")	10
	S350 	14" (~ 350 mm)	500 m³/h (2200 gpm)	48 Volt	3.0 Watt	8 x 20 m (~ 8 x 65' 7") 20 mm (~ 0.8")	280/200/50 mm (11.0/7.9/2.0")	3-32 kHz	~ 3400 mm (~ 11' 2")	10
	S500 	20" (~ 500 mm)	800 m³/h (3520 gpm)	48 Volt	3.5 Watt	10 x 30 m (~ 10 x 98' 5") 20 mm (~ 0.8")	310/220/50 mm (12.2/8.7/2.0")	3-32 kHz	~ 4500 mm (~ 14' 9")	10
X-Pro Line	X-Pro 1 	30" (~ 750 mm)	works independent from capacity	48 Volt	4.0 Watt	12 x 25 m (~ 12 x 82') 40 mm (~ 1.6")	340/240/50 mm (13.4/9.4/2.0")	3-32 kHz	~ 5600 mm (~ 18' 5")	10
	X-Pro 2 	40" (~ 1000 mm)	works independent from capacity	48 Volt	4.0 Watt	12 x 50 m (~ 12 x 164') 40 mm (~ 1.6")	340/240/50 mm (13.4/9.4/2.0")	3-32 kHz	~ 8200 mm (~ 26' 11")	10



More Vulcan references you will find online at www.cwt-vulcan.com