The electronic anti-scale system

The green alternative to water softeners

MADE IN GERMANY

German Technology

Absolutely Magnetism-Free

No Salt

No Chemicals

No Maintenance

25 YEAR WARRANTY

Quality – Made in Germany

Physical water treatment with Christiani Wassertechnik GmbH

Christiani Wassertechnik GmbH (CWT) was established in 1948. Today, it is one of the oldest manufacturers of physical water treatment in the world. The family-run business is headquartered in Berlin, Germany. CWT has more than 40 years of experience in the development and production of anti-scale systems and its products are available in more than 70 countries world-wide.

Vulcan offers an eco-friendly technology that comes with an outstanding quality commitment and a 25-year warranty. It solves problems with hard water in residential, commercial and industrial applications.

German Manufacturer

CWT Eco-friendly Water Treatment Since 1948

More than 40 years of experience in physical water treatment.

Table of Contents

Vulcan – Prevents Limescale and Rust

Vulcan – prevents limescale and rust 2

The limescale and rust problem 4

The 3 Vulcan effects 6

Residential Line

Vulcan 3000 / Vulcan 5000

Application areas and technical data 8

Benefits 9

Commercial Line

Vulcan S10 / S25 / S50 / S100

Application areas and technical data 10

Benefits 11

Industrial Line

Vulcan S150 / S250 / S350 / S500 / X-Pro 1 / X-Pro 2

Application areas and technical data 12

Benefits..... 13

References 14

Installation Instructions

FAQs – Frequently asked questions 18

Installation notes and examples..... 19

Installation instructions – Residential Line 20

Installation instructions –
Commercial and Industrial Line 21

Installation instructions – X-Pro Line 22

Client list 23

Models and sizes 24

Vulcan – Prevents Limescale and Rust

The eco-friendly alternative to water softeners

Vulcan provides an eco-friendly water treatment system which prevents limescale and rust in the water pipes and equipment. The method is based on the Vulcan-Impulse-Technology and treats the water without applying any chemicals or salt.

Special electronic impulses change the crystallization process of the calcium in hard water, causing the particles to lose their ability to stick to surfaces.

- ✓ Important minerals remain in the water
- ✓ Maximum working life of machinery and equipment
- ✓ Reduction of limescale deposits in the whole piping system
- ✓ **25-year warranty**
- ✓ **Made in Germany**

Model sizes from ½" up to 40" pipe diameter

Vulcan is a customized solution for your individual needs. The various product lines of Vulcan solve problems in residential use, commercial applications and in industrial settings.

Benefits

Vulcan solves limescale and rust problems

- Eco-friendly solution against limescale problems
- No use of salt or chemicals
- Suitable for pipe diameters from ½" up to 40"
- Fully cast in acrylic for optimal quality endurance
- Maintenance-free
- Do-It-Yourself installation – no need to cut the pipes
- Works on every pipe material – iron, copper, stainless steel, galvanized iron, plastic, PVC, PE-x, compound pipes, etc.

CWT Quality – Made in Germany

- Manufactured by a 3rd generation family business
- Over 40 years of experience in physical water treatment
- International 25-year product warranty
- Available in more than 70 countries
- Tested by independent institutes
- cULus, TUV and CE certified

The limescale and rust problem

The water we use in our private houses as well as in commercial and industrial facilities contains dissolved limescale consisting of calcium and magnesium.

When exposed to a temperature increase or change of pressure, the calcium crystallizes and builds incrustations. These hard limescale deposits appear often in places where water is heated, swirls around or leaves the pipes.

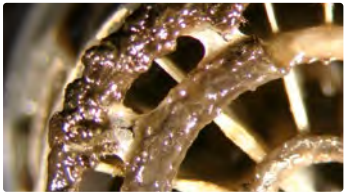
Pipe with limescale deposits

Washing machine heating element

The longer you wait to take action against these problems, the more damages and costly repairs will arise. Soon you will have to replace the whole piping system and buy new equipment.

Scale deposits on the inside of pipes, on heating elements or on expensive machinery create many problems.

Tube heat exchanger


Water feeder with biofilm

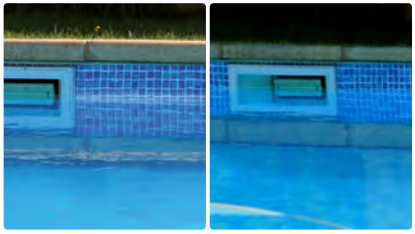
Scale-related problems

- Loss of energy due to a longer heating process
- High costs of repairs and maintenance on machines and equipment
- Loss of water pressure due to decreased pipe diameters
- High cleaning costs and need for aggressive cleaning agents
- Decrease in overall industrial productivity

Heating element

The Vulcan Treatment Effects – Before and After

Grill plate in a professional kitchen


Swimming pool water line

Cooling tower grid

Pool chlorinator

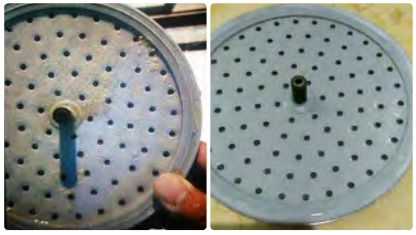
Toilet bowl

Grease trap

Greenhouse plants

Piping system

Heating element


Shower head

Ball float valve

Shell and tube heat exchanger

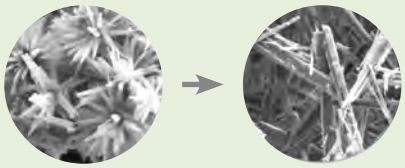
The 3 Vulcan Effects

1. Vulcan prevents scaling in pipes and appliances

Without the Vulcan water treatment, limescale particles in the water form sticky crystals that then build solid deposits. The Vulcan-Impulse-Technology modifies the crystallization of calcium and magnesium using the natural process of electrophoresis. The crystals become smoother and rod-shaped and can no longer attach to each other. The more rod-shaped crystals that are created, the stronger the positive effect of limescale-prevention. Limescale is now washed away in the water as a fine powder.

1st Vulcan effect

Vulcan modifies the structure of the calcium crystals



without Vulcan with Vulcan

2. Vulcan gently sanitizes the piping system

The Vulcan water treatment changes the balance between the scaling process and natural resolving process. Mono-crystals can no longer form deposits, therefore the limescale build-up process is reduced. The natural limescale resolving process now needs only to deal with existing deposits and can effectively combat them. Thus limescale is removed faster than it forms. The natural surplus of carbonic acid dissolves the limescale from the limescale. Gradually and carefully, the deposits in the pipes are cleaned out.

$Ca(HCO_3)_2$	+	Vulcan	→	$CaCO_3$	+	CO_2	+	H_2O
Calcium hydrogen carbonate		Vulcan impulse		Mono-crystal		Carbon dioxide		Water

2nd Vulcan effect

Vulcan reduces limescale deposits in the piping system

without Vulcan with Vulcan

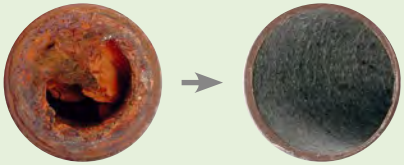
3. Vulcan protects against rust damage and perforation

Copper and/or iron oxidation occurs in all metal pipes through contact with hard water. These oxides seriously affect the pipe surfaces and often lead to corrosion.

The Vulcan-Impulse-Technology generates an electrophoresis-effect which produces a protective metal-carbonate layer. According to the material of the pipe, this layer consists of copper carbonate, iron carbonate or zinc carbonate and settles on all shiny metal surfaces. It protects the pipe from harmful substances which could lead to corrosion.

3rd Vulcan effect

Vulcan produces a protective metal-carbonate layer



without Vulcan with Vulcan

Vulcan in a water tank
Left: Tank without any treatment
Right: Tank with Vulcan treatment

Residential Line

The Vulcan Residential Line units have been designed to protect the piping system in private houses and small equipment, such as coffee machines and dishwashers. These units can easily be installed within a few minutes.

Houses and buildings

The piping system, water heaters, washing machines and other appliances are protected.

Water heaters and heat exchangers

Vulcan controls limescale build-up in water heaters in your home and reduces their maintenance.

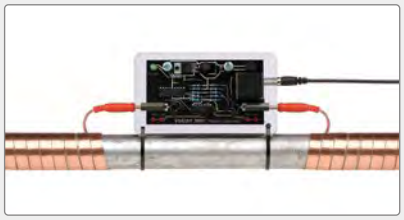
Pools & Jacuzzis

Vulcan protects the equipment and pipes against harmful deposits. You can cut down on chlorine use and many other additives.

Solar water heater

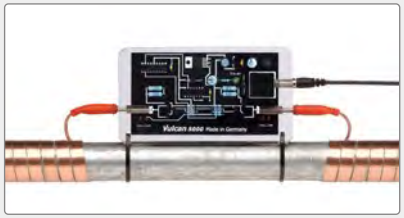
Vulcan reduces limescale build-up in collectors, it protects hot water tanks and vacuum tubes, and keeps the system from over-heating.

***Vulcan* 3000**



Max. pipe diameter:	1½" (~ 38 mm)
Max. capacity:	3000 l/h (13 gpm)

***Vulcan* 5000**



Max. pipe diameter:	2" (~ 50 mm)
Max. capacity:	8000 l/h (35 gpm)

Application areas

- Houses and apartments
- Drinking water
- Bungalows
- Swimming pools & jacuzzis
- Small machinery
- Garden irrigation systems
- Garden sprinklers
- And many more

Benefits

- ✓ Reduction of limescale deposits throughout the whole piping system
- ✓ Eco-friendly system without chemicals or salt
- ✓ Faster cleaning of kitchen and bathroom
- ✓ Important minerals remain in the water
- ✓ Gardening systems and sprinklers stay clean and last longer
- ✓ Considerable savings on washing and cleaning agents
- ✓ Less time and effort spent on repairs and maintenance at your home, e.g. water heaters, washing machines, etc.
- ✓ Swimming pool operations are improved

Commercial Line

The Commercial Line units treat pipe diameters up to 6" and have been designed to perfectly meet the requirements of small and large commercial facilities. These programmable units allow for individual adjustment according to the materials and diameters of the pipes.

Application areas

Buildings and housing

Condominiums & large buildings

Educational institutions

Public swimming pools

Golf & tennis clubs

Fitness clubs

Agriculture

Plants

Livestock

Irrigation systems

Machinery

And many more

Medical

Hospitals

Nursing homes

Residences

And many more

Hospitality

Hotels and resorts

Restaurants and cafés

Cruise ships, maritime

And many more

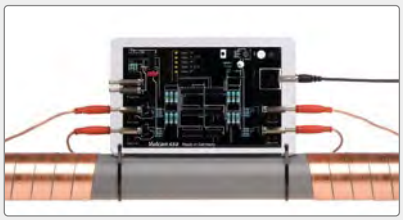
Vulcan S10

Max. pipe diameter: 3" (~ 76 mm)
Max. capacity: 15 m³/h (65 gpm)

Vulcan S25

Max. pipe diameter: 4" (~ 100 mm)
Max. capacity: 30 m³/h (130 gpm)

Vulcan S50



Max. pipe diameter: 5" (~ 125 mm)
Max. capacity: 70 m³/h (300 gpm)

Vulcan S100

Max. pipe diameter: 6" (~ 150 mm)
Max. capacity: 120 m³/h (530 gpm)

Benefits

- ✓ Maximum working life of commercial machinery and equipment
- ✓ Less time and effort spent on cleaning
- ✓ Improved performance of restaurant and kitchen equipment
- ✓ Reduction of maintenance on irrigation systems and water tapping
- ✓ Food and beverages keep their natural taste
- ✓ Easier grease trap handling
- ✓ More reliable water supply within sanitary facilities
- ✓ Savings due to more efficient use of energy for heating water

Industrial Line

The Industrial Vulcan units treat pipe diameters up to 40" and have been designed to provide solutions for all kinds of applications in light and heavy industries. The customized adjustment to pipe diameters and pipe materials is based on 10 different system-integrated programs.

Application areas

Hospitals
Aluminium industry
Chemical manufacturing
Lumber industry
Car industry
Rubber production
Injection molding
Printing industry

Cooling towers
Heat exchangers
Food production
Maritime and cargo industry
Textile industry
Refineries
Waste water treatment
And many more

Vulcan installed in a food factory

Sausage production

Vulcan S150

Max. pipe diameter:	8" (~ 200 mm)
Max. capacity:	180 m³/h (790 gpm)

Vulcan S250

Max. pipe diameter:	10" (~ 250 mm)
Max. capacity:	350 m³/h (1540 gpm)

Vulcan S350

Max. pipe diameter:	14" (~ 350 mm)
Max. capacity:	500 m³/h (2200 gpm)

Vulcan S500

Max. pipe diameter:	20" (~ 500 mm)
Max. capacity:	800 m³/h (3520 gpm)

Vulcan X-Pro 1

Max. pipe diameter:	30" (~ 750 mm)

Vulcan X-Pro 2

Max. pipe diameter:	40" (~ 1000 mm)

Benefits

- ✓ Productivity increase due to the reduction of limescale incrustations
- ✓ Less time and effort spent on cleaning cooling towers
- ✓ Spend less on machinery maintenance
- ✓ More efficient use of energy costs
- ✓ Fast amortization of acquisition costs
- ✓ Inexpensive installation without interruption of the production process
- ✓ Reduces chemical use in many areas
- ✓ Maximum working life of expensive production equipment
- ✓ More reliable water supply
- ✓ Extended cleaning intervals

References

These are some reference examples.
You find more references at:
www.cwt-vulcan.com

CWT – Christiani Wassertechnik GmbH
Mr. Rolf Christiani
Selerweg 41
12169 Berlin
Germany

HARTWALL AREENA

We have been using Vulcan water treatment equipment in our ice hockey hall Hartwall Arena since 2003.

We are using many sizes of several heating/cooling equipment in our water system:
- Vulcan 5000
- Vulcan S25
- Vulcan S100

We have realibility with these systems and have been most satisfied in using them.

Vulcan is a high-quality and great solution to different kind of premise.

Sincerly,
Hartwall Arena

Philipp Best Plumbing
All your Commercial & Industrial Plumbing Needs

CWT – Physical water treatment system

I've been in the plumbing industry for 32 years and currently have five staff working for me at Phillip Best Plumbing. Since becoming available, we've purchased a number of CWT water systems to stop calcium deposits building up in a range of different piping systems. These deposits create many unwanted effects such as clogged pipes and irreversible damage to pipes and other plumbing parts. I found the CWT water treatments to be very effective in high temperature heating systems such as commercial combustion ovens in restaurants and even in a high temperature heating system at a local abattoir.

There are also huge time savings associated with CWT water systems. Installation time is cut by at least 90% when compared to similar units. The units, which allow limescale particles to be washed away, are not only proving to be successful in commercial and industrial applications, but in private homes with limescale and rust problems. I installed a CWT system to protect the hydraulic heating system, which lies under the cement slab of our home.

CWT has been a great cost saving unit initiative that will protect your piping system from ongoing limescale and rust problems.

Your Phillip Best Plumbing Team

Within three months of installing the CWT water treatment system the iron residual and sludge disappeared. I was staggered by the results. The pipe was completely clear and there were no signs of the rust and limescale at all. A reliable and clean sprinkler system is very important for us to maintain a healthy garden. The CWT system has saved me an enormous amount of time and money and I'm no longer cleaning sprinkler heads or replacing the solenoids in the reticulation system.

Lance Butcher, Gelorup

Spokane Public Schools

Our first installation in Spokane schools was in Shaw Middle School - a 50 years old building and with rusty and dirty looking water. The cooling tower was full of limescale when we started and after few weeks, limescale started to fall of in big junks and it cleaned out all the limescale. Now the water is always clean and the janitor does not have to flush the piping anymore. ***Spokane Public Schools, Washington - USA***

We are a facility management company responsible for the maintenance and repairs in medical institutions. Some months ago we have installed the Vulcan S250 in one of the hospital. We can identify a considerable benefit. For example, there are almost no limescale deposits on the 2,500 shower heads to be seen any more. This saves manpower and costs of the exchange of sanitary equipment.

Gegenbauer Health Care Service Hospital Management

HYUNDAI

Installation Details

Location: A car engine manufacturing factory, Hyundai Motor Ulsan

Area: A cold water circulation pipeline for the cooling tower and the induction hardening machine

Pipe size: 100 mm

Model: Vulcan S25

Installer: Vulcan-Korea team

Scale Problems

1. Scale problems in the pipelines and the induction hardening machine.
2. There are 9 secondary small pipes, they had to be cleaned manually every 2-3 months.

Vulcan Effect

Installation of a Vulcan S25 unit:
May 21st, 2018.

Note: scale was not manually removed before the Vulcan was fitted on source pipe (see photo).

Examination of secondary piping:
November 21st, 2018

1. Since Vulcan S25 was installed, the Hyundai Engineering Team has stopped the regular manual cleaning process.

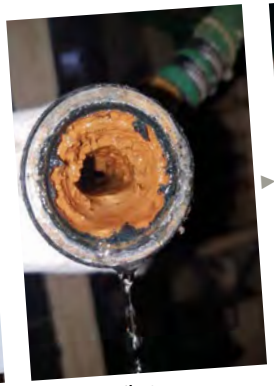
   Observation: the flow rate with the Vulcan unit is now even higher than immediately after previous manual cleaning had been done.

2. After Vulcan S25 had been installed for 6 months, the secondary pipes were opened: scale that had been left in piping had disappeared and all 9 secondary pipes had become clean (see photo).

   Observation: Biofilms in the cooling tower had disappeared since the Vulcan unit was installed.

Vulcan S25 was installed around 50 meter before the induction hardening machine.

There are 9 secondary small pipes with water meters. These meters were installed to make sure a stable flow rate. If the flow rate goes down, it would cause a problem of the induction hardening machine. Therefore, the pipes had to be cleaned manually every 2-3 months.



First inspection:
May 21, 2018.
Inside of a secondary small pipe, before Vulcan S25 was installed.

Last inspection:
November 21, 2018.
After 6 months with Vulcan treatment: the pipe is free of scale.

SWAROVSKI

"After 6 months with Vulcan, the chemicals have been greatly reduced more than 80% for the cooling towers."

Beihai Thermal Power Plant Heat Pump Station

Installation Model:

Vulcan 3 x Vulcan X-Pro 1
1 x Vulcan X-Pro 2

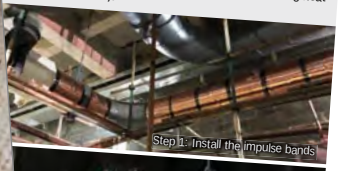
Installation Project: A New heat pump station

Installed by: Dalian Jiayifang Water Technology

Installation purpose:
The heating system in the original heat pump station has serious scaling problems and the heat pump efficiency is reduced, which can not meet the heating demand. Therefore, the Vulcan X-Pro series were installed in the newly built heat pump station to protect the heat pump system and prevent the scale from reducing the heat exchange efficiency.

***X-Pro 1* for low temperature water network** : *circulating water system in Beiwang Station*

DN600, water flow 2600 m³/h, installed on the inlet pipe of the plate heat exchanger to prevent scale from reducing heat exchange efficiency.



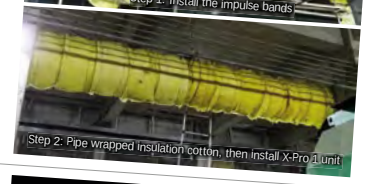
Step 1: Install the impulse bands

Step 2: Pipe wrapped insulation cotton, then install X-Pro 1 unit

***X-Pro 1* for heating network** : *circulating cooling water system in Donggang Station*

DN700, water flow 2949 m³/h, installed on the water inlet pipe of the heat pump to protect the inside heat exchanger, also to prevent scale from reducing heat exchange efficiency.

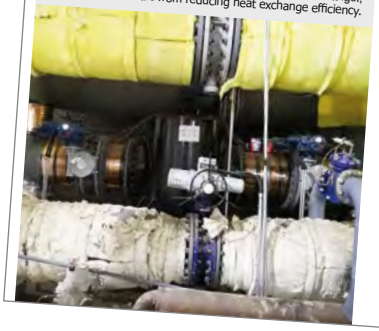
Step 1: Install the impulse bands



Step 2: Pipe wrapped insulation cotton, then install X-Pro 1 unit

***X-Pro 1* for heating network** : *circulating cooling water system in Central Station*

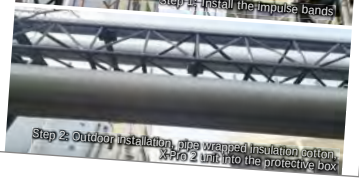
DN700, water flow 2949 m³/h, installed on the water inlet pipe of the heat pump to protect the inside heat exchanger, also to prevent scale from reducing heat exchange efficiency.



***X-Pro 2* for condenser** : *circulating cooling water system*

DN1000, water flow 6700 m³/h, installed on the water inlet pipe of the heat pump to protect the inside heat exchanger, also to prevent scale from reducing heat exchange efficiency.

Step 1: Install the impulse bands



Step 2: Outdoor installation, pipe wrapped insulation cotton, X-Pro 2 unit into the protective box

mondi Packaging

"Now the pipes and production equipment require much less cleaning."

Lhasa 21 Inn

Installation details

Location: Lhasa 21 Inn, Tibet

Model: Vulcan 5000

Area: Water main

Installed by: Shaanxi Wasser

Installation Purpose

In April 2017, a 6-ton tubular solar water heating system was installed. Without any water treatment, as of May 2018, due to the serious scaling problems, manual descaling and system maintenance had been made for 3 times. Even solar glass tubes, headers, valves, pumps, etc. must be replaced, the client had a large loss.

Pipe joint fittings had to be replaced because of scale and rust.

Heating rods were damaged by scale.

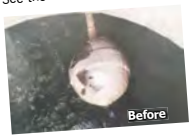
The results

1. After installing Vulcan 5000 for 1 month, the scales of t shower heads have been significantly reduced.

Before

Aft

2. The scales on the float valve in the hot water tank h been softened, they can easily be tapped off.
See the video here: ***www.bit.ly/cn-tank***



Before

After

3. After 3 months of installation, we cleaned the hot water tank, and found a large amount of scales were drained out. The photo below is the scales removed from the water tank. Also, the heat transfer efficiency of the solar system has been significantly improved.

Scale removed from the water tank, after installing V5000 for 3 months.

Coca-Cola

INSTALLATION DETAILS

Location: Coca-Cola Factory in Marrakech, Morocco

Model: Vulcan 5000

Area: The water inlet of the water recycling room

Pipe: 2" stainless steel pipe

RESULTS

1. Two weeks after Vulcan was installed, lots of limescale deposits had disappeared in the pipe.
2. 48 hours after Vulcan was installed, the filter still stays clean.
3. The maintenance intervals are reduced

The Coca-Cola factory in Marrakech, Morocco

Before Vulcan was installed the filter was full of hard limescale deposits.

2 weeks after Vulcan was installed, limescale had been softer and fallen out.

Vulcan 5000 is installed on the water inlet of the water recycling room.

Without Vulcan, the filter was quickly stuck by scale deposits, and it had to be changed every 48 hours.

48 hours after Vulcan was installed, the filter still stays clean.

FAQs - Frequently Asked Questions

How do I choose the right model size? Please check the pipe diameter in the area where you want to install Vulcan. Then choose the unit that is designed for this size.

Do copper or synthetic pipes need a limescale protection device at all? Yes. Copper and plastic pipes are prone to calcifications, too. The smoother a surface is the longer it can resist the process of calcification, but once a first layer of limescale has built up, the incrustation process proceeds just as fast as on any other surface.

Up to which degree of water hardness can Vulcan be applied? Vulcan operates within a high performance frequency range. It can thus be successfully applied even on water with a particularly high degree of hardness.

Does the Vulcan treatment have a softening effect on the water? As the water treated by Vulcan does not lose any minerals, such as calcium and magnesium, the composition of the water remains unaltered. It feels noticeably softer, though. You are sure to feel this effect when showering or washing your hair. The treatment does not change the measured water hardness, but modifies the shape of its components.

How long does it take Vulcan to sanitize the pipes? Vulcan reduces limescale and rust slowly without negatively affecting the pipes. The cleaning process takes about as long as it took the incrustations to develop.

Which pipe materials are the devices suitable for? Vulcan is suitable for all pipe materials: iron, copper, plastic, stainless steel, PVC, compound pipes, PE-X, etc.

Which voltage range is the electronic plug-in power supply unit suitable for? All Vulcan power supply units are suitable for voltage ranges between 87 Volt – 260 Volt and 50 Hz – 60 Hz. They operate on 48 VDC.

What are the power costs of Vulcan per year? Vulcan is completely maintenance-free. The cost of electric energy per year amounts to approx. USD 3 - 7 (2-6 €).

Installation Examples

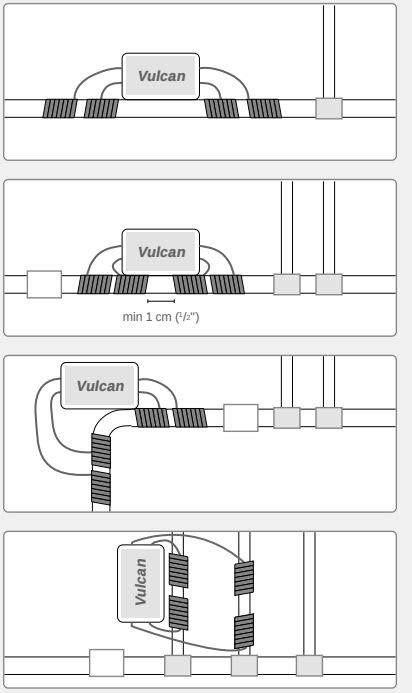
1. For optimal water treatment Vulcan is best installed near the water meter or at the main water supply.

2. The impulse band windings can be placed on the left side, on the right side or underneath the electronic device. Leave a safe distance of at least ½" (1 cm) between the bands.

3. Vulcan can be installed vertically, horizontally or at any other angle. If there is no space available on the pipe the electronic block can also be wall-mounted.

4. In case of limited space the windings can be placed partly on the main pipe and partly on the distributor pipe.

All these different installations are possible because the treatment impulses extend over several meters to either side of the pipes.



Installation Notes

1. Protect the electronic unit, the impulse bands and the power supply against humidity and water.

2. Use the provided electronic switching adaptor only.

3. Do not cut the impulse bands nor the 48 V power cord of the power supply unit.

4. Do not remove the end caps or the impulse band insulation.

5. The operating temperature of Vulcan ranges from -13°F to 122°F (–25°C to +50°C).

6. Clean the device with water only.

7. Temperature peaks on heating element surfaces should not exceed ~203°F (~95°C).

Installation Instructions — Residential Line

1. Put the two cable ties through the fixing holes at the bottom of the electronic device. Now place the device onto the pipe. Use the cable ties to latch the device to the pipe.

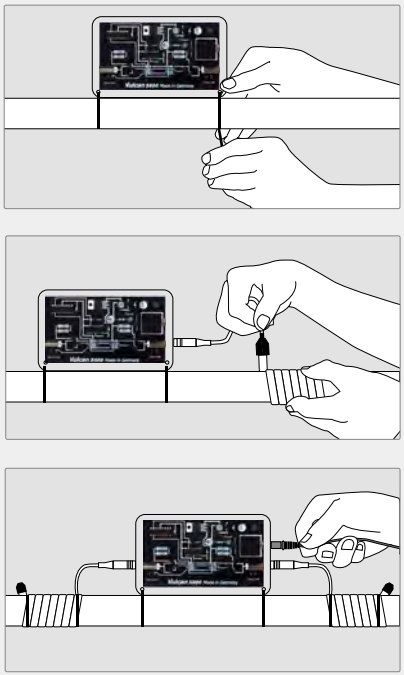
2. Connect one of the impulse bands to the device and use another cable tie to latch it to the pipe.

3. Wind the impulse bands around the pipe producing a coil. Make sure you wind the band tightly to the pipe and place the windings close to each other.

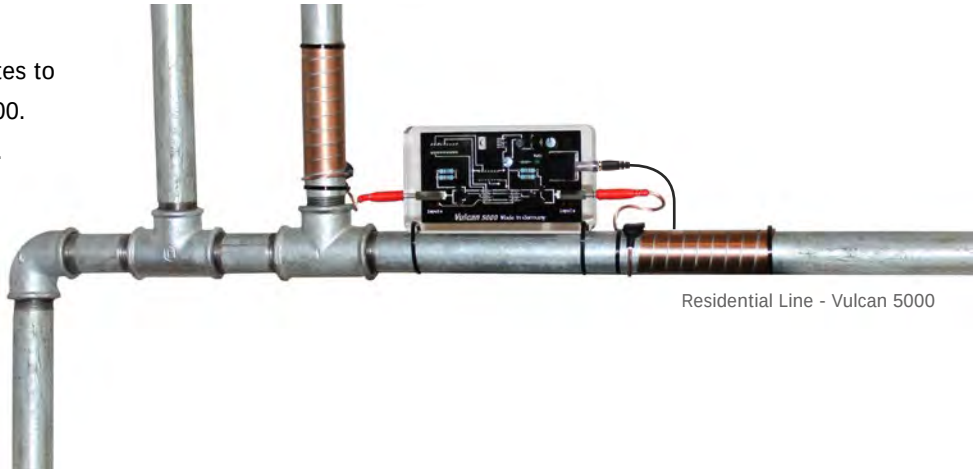
4. Latch the end of the impulse band to the pipe using another cable tie. Now repeat the procedure with the second impulse band.

5. **First plug the connector into the upper right in-jack of the device and then connect the power supply unit with an electrical outlet.**

6. The red pilot lights will illuminate as soon as the device starts to operate. Vulcan works from now on maintenance-free.



It only takes 10 minutes to install a Vulcan 5000. No tools needed.



Residential Line - Vulcan 5000

Installation Instructions — Commercial and Industrial Line

1. Put the two cable ties through the fixing holes at the bottom of the electronic device. Now place the device onto the pipe. Use the cable ties to latch the device to the pipe.

2. Plug one of the impulse bands into the bottom impulse band in-jack and latch it to the pipe using another cable tie.

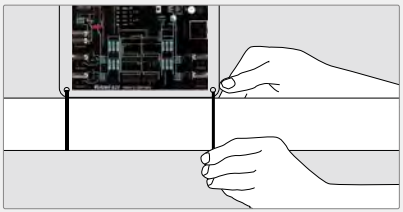
3. Wind the impulse band around the pipe producing a coil. Make sure you wind the band tightly to the pipe and place the windings close to each other.

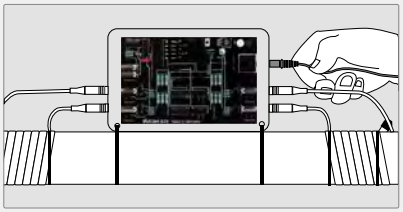
4. Latch the end of the band to the pipe using another cable tie. Now plug another impulse band into the in-jack on the opposite side and repeat the procedure.

5. Plug another impulse band into the next impulse band in-jack and, according to the device type, repeat steps 2 - 4 until all impulse bands are in use. All impulse bands must be wound tightly around the pipe and fastened with cable ties.

6. **First plug the connector into the upper right in-jack of the device and then connect the power supply unit with an electrical outlet.**

7. Programming: Set the programm by touching the twin metal sensors on the left side simultaneously.





Installation Instructions — X-Pro Line

1. Put the **cable ties** through the fixing holes at the bottom of the electronic device. Now place the device onto the pipe. Use the cable ties to fix the device to the pipe.

2. Plug now **impulse band A** into the bottom impulse band in-jack A and latch it to the pipe with the **fixing tape**.

3. Wind the impulse band around the pipe producing a coil. Make sure you wind the band tightly to the pipe and place the windings **close to each other**.

4. Latch the end of the band to the pipe with the fixing tape.

4.2. Only for Vulcan X-Pro 2

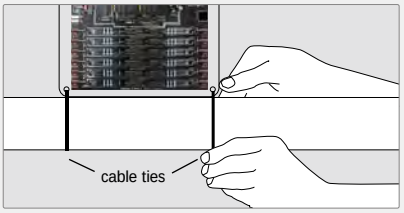
*Connect the end plug of **impulse band A** with the plug of **impulse band A.2** and wind this impulse band A.2 directly next to the impulse band A and fix it with the fixing tape.*

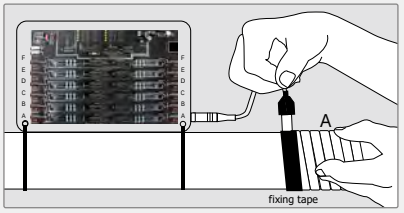
5. Plug the other **impulse band A** into the in-jack on the opposite side and repeat the procedure 2. to 4.

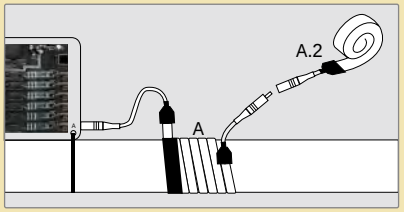
6. Plug **impulse band B** into the next impulse band in-jack B and repeat step 2 - 5 until all impulse bands are in use. All impulse bands must be wound tightly around the pipe and fixed with the fixing tape.

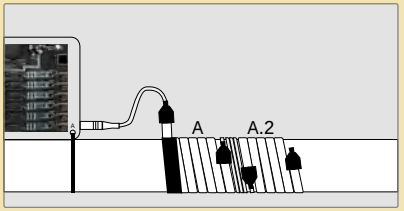
7. **First plug the connector into the upper right in-jack of the device and then connect the power supply unit with an electrical outlet.**

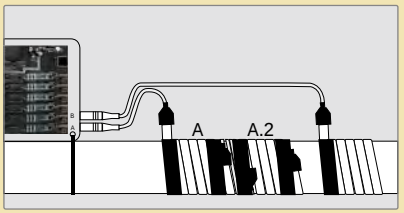
8. Programming: Set the programm by touching the twin metal sensors on the left side simultaneously.

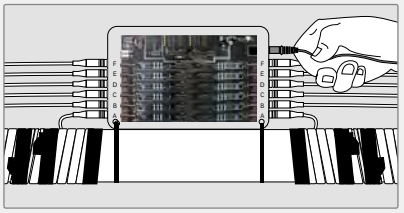






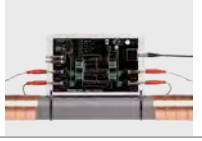
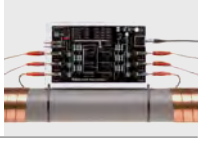






Unilever
Nestlé
Coca-Cola
SWAROVSKI
Comfort INN
ibis HOTELS
ibis budget HOTELS
PEPSICO
SAMSUNG
CHRYSLER
PANDORA
Holiday Inn
DANONE
WAFFLE HOUSE
BOSCH
Mercure HOTELS
GALERÍA PLAZA REFORMA
InterContinental HOTELS & RESORTS
Freixenet
Le MERIDIEN
MARHABA HOTEL
White Castle
HYUNDAI
intel
MOBILEYE
RENAISSANCE HOTELS
amazon
DAIMLERBENZ
PARIS
THE RITZ-CARLTON
MÖVENPICK Restaurants
Fazer
HARTWALL ARENA
'TORAY'
FAG
NOVOTEL
MARRIOTT BONVOY
HITACHI
TDK
Tim Hortons
Royalton Punta Cana Resort & Casino
Hilton
ALCATEL
SHERATON
HONDA
THK
Al Ahram
PALMA SUITES HOTEL RESIDENCE
HYATT
PARK HOTEL
Heineken
AVIGNON CERAMIC
ACCOR
RheinChemie
ALCOA
ACACIA HOTEL & RESORT
Gegenbauer
Days Hotel
Mc Clean Safe and clean toilets
TIKUL HOTEL BOUTIQUE
VIESSMANN
K water
ALDI
VARIOPLAST
STAEDTLER
Shell
KARNAVATI CLUB

Models and Sizes

	Residential Line		Commercial Line			
	Vulcan 3000	Vulcan 5000	Vulcan S10	Vulcan S25	Vulcan S50	Vulcan S100
						
Max. pipe Ø	1½" (~ 38 mm)	2" (~ 50 mm)	3" (~ 76 mm)	4" (~ 100 mm)	5" (~ 125 mm)	6" (~ 150 mm)
Max. capacity	3000 l/h (13 gpm)	8000 l/h (35 gpm)	15 m³/h (65 gpm)	30 m³/h (130 gpm)	70 m³/h (300 gpm)	120 m³/h (530 gpm)
Voltage	48 Volt	48 Volt	48 Volt	48 Volt	48 Volt	48 Volt
Wattage	2.2 Watt	2.2 Watt	2.5 Watt	2.5 Watt	2.5 Watt	2.7 Watt
Impulse bands	2 x 1 m (~ 2 x 39")	2 x 2 m (~ 2 x 79")	2 x 3 m (~ 2 x 118")	4 x 3 m (~ 4 x 118")	4 x 4 m (~ 4 x 13' 2")	6 x 4 m (~ 6 x 13' 2")
Band width	10 mm (~ 0.4")	10 mm (~ 0.4")	20 mm (~ 0.8")	20 mm (~ 0.8")	20 mm (~ 0.8")	20 mm (~ 0.8")
Dimensions (mm)	125/80/30 (4.9/3.1/1.2")	150/90/30 (5.9/3.5/1.2")	190/120/40 (7.5/4.7/1.6")	200/130/40 (7.9/5.1/1.6")	200/130/40 (7.9/5.1/1.6")	230/150/40 (9.1/5.9/1.6")
Frequency range	3-32 kHz	3-32 kHz	3-32 kHz	3-32 kHz	3-32 kHz	3-32 kHz
Required space	~ 250 mm (~ 10")	~ 350 mm (~ 14")	~ 500 mm (~ 20")	~ 800 mm (~ 32")	~ 900 mm (~ 35")	~ 1200 mm (~ 47")
Programs	1	1	3	5	5	10

Models and Sizes

	Industrial Line				X-Pro Line	
	Vulcan S150	Vulcan S250	Vulcan S350	Vulcan S500	Vulcan X-Pro 1	Vulcan X-Pro 2
Max. pipe Ø	8" (~ 200 mm)	10" (~ 250 mm)	14" (~ 350 mm)	20" (~ 500 mm)	30" (~ 750 mm)	40" (~ 1000 mm)
Max. capacity	180 m³/h (790 gpm)	350 m³/h (1540 gpm)	500 m³/h (2200 gpm)	800 m³/h (3520 gpm)	unlimited capacity	unlimited capacity
Voltage	48 Volt	48 Volt	48 Volt	48 Volt	48 Volt	48 Volt
Wattage	2.7 Watt	3.0 Watt	3.0 Watt	3.5 Watt	4.0 Watt	4.0 Watt
Impulse bands	6 x 8 m (~ 6 x 26' 3")	8 x 10 m (~ 8 x 32' 9")	8 x 20 m (~ 8 x 65' 7")	10 x 30 m (~ 10 x 98' 5")	12 x 25 m (~ 12 x 82')	12 x 50 m (~ 12 x 164')
Band width	20 mm (~ 0.8")	20 mm (~ 0.8")	20 mm (~ 0.8")	20 mm (~ 0.8")	40 mm (~ 1.6")	40 mm (~ 1.6")
Dimensions (mm)	230/150/40 (9.1/5.9/1.6")	280/200/50 (11.0/7.9/2.0")	280/200/50 (11.0/7.9/2.0")	310/220/50 (12.2/8.7/2.0")	340/240/50 (13.4/9.4/2.0")	340/240/50 (13.4/9.4/2.0")
Frequency range	3-32 kHz	3-32 kHz	3-32 kHz	3-32 kHz	3-32 kHz	3-32 kHz
Required space	~ 1800 mm (~ 71")	~ 2500 mm (~ 99")	~ 3400 mm (~ 11' 2")	~ 4500 mm (~ 14' 9")	~ 5600 mm (~ 18' 5")	~ 8200 mm (~ 26' 11")
Programs	10	10	10	10	10	10

Vulcan

Anti-Scale System

www.cwt-vulcan.com

German production by:
Christiani Wassertechnik GmbH
Selerweg 41, 12169 Berlin, Germany

EN 01/26